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TRANSACTIONS

OF THE

Association,

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TRANSACTIONS

OF THE

ASSOCIATION

OF

Fellows and Licentiates

OF THE

KING'S AND QUEEN'S COLLEGE

OF

PHYSICIANS

IN

IRELAND.

VOLUME I.

DUBLIN:

PRINTED AT THE HIBERNIA PRESS-OFFICE; FOR JOHN CUMMING, 16, LOWER ORMOND-QUAY; AND LONGMAN, HURST, REES, ORME, AND BROWNE, LONDON.

1817.

Koninklijke Bibliotheek 's Hage.

Verwijderd K. B.

PREFACE.

THE science and the practice of Physic have owed so much of their advancement, during the last half century, to public Journals, and the Transactions of various learned Societies, that it were now superfluous to conciliate the indulgence of the Profession towards a new Work of this Miscellaneous kind. The spirit of research is obviously promoted by whatever tends to open fresh avenues, or multiply opportunities, of communication among the inquisitive and well-informed. Detached fragments of knowledge are thus brought

to light, which might otherwise have been lost or overlaid by extraneous matter ; and a common sympathy and co-operation obtained in the labours of professional improvement.

In all practical Sciences, founded on experiment and analysis, facts and testimonies, however miscellaneous or insulated, have a relative as well as separately intrinsic value. In the latter view, they serve as marks or guides for the breaking up of new ground, to enlarge the field of inquiry ; in the former, they are subservient to the higher purposes of scientific truth and arrangement. For, the enlightened Practitioner, (to borrow the language of an eminent Philosopher) " distrusting conclusions which rest upon this or that individual case, is anxious, by combining those of an immense multitude, to separate accidental conjunctions, from

established connections, and to ascertain those laws of the human frame, which rest on the universal experience of mankind."*

In the year 1816, an Association of Fellows and Licentiates of the College of Physicians in Ireland, was instituted, to hold Monthly Meetings for the communication of Medical and Philosophical Intelligence. Hospital Reports, Morbid Histories, and other original papers, are read at these Meetings; and the Volume of Transactions now offered to the Profession, consists of a series of such Communications, as their respective authors have consented to render public.

The Members of the Association feel

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* Stewart's Philosophy of the Human Mind, Vol. 2. Page 469.—2nd edition.

impressed with the importance of limiting the design of this Publication to such novel, and as far as possible, concise contributions, as may be strictly considered additions to the present stock of Medical knowledge. The improvement of Pathological science is proposed as the object of chief importance; and with a view to this purpose, the Members and their Correspondents are specially invited to communicate digested results of large experience, in particular diseases (either in Hospital or Private practice) illustrated, where it is attainable, by the information of morbid anatomy.

The Association will be happy to receive Communications from Medical Practitioners in the country parts of Ireland; which may be transmitted to the President or the Secretary.

It is hardly necessary to state that the

Members of the Association collectively, do not mean to pledge themselves for any facts or opinions, which the Authors of the respective Papers may promulgate, through the channel of their Transactions.

Dublin, September, 1817.

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CASE

OF

ULCERATION AND RUPTURE

OF

THE STOMACH,

BY

JOHN CRAMPTON, M. D.

HONORARY FELLOW OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, PROFESSOR OF MATERIA MEDICA, AND ONE OF THE PHYSICIANS OF STEEVENS' HOSPITAL.

Read, Nov. 4, 1816.

It has been observed by those physicians who are most in the habit of opening bodies, that they sometimes find morbid appearances after death, which they had not expected, even though they had closely attended to the antecedent symptoms. It is desirable, therefore, to multiply our experience as much as possible in this respect, and try to connect the symptoms with the true pathological state. On this account, though little is to be learned in the way of practice from the following case, I am induced to offer it to the Association; the appearances after death were rather unusual, and the symptoms before death were closely observed, and accurately noted at the time.

CASE.

Miss. H——, æt. 29, of a sallow complexion, spare habit, and regular as to female health, on the 19th Oct. 1816, at 3 o'clock in the afternoon, was seized with a sudden spasm, as she called it, in the stomach, which made her apprehensive of immediate dissolution; she had been long subject to pain in her stomach and in both sides, but they generally gave way to medical treatment of a few days.

At 5 o'clock when I saw her, she suffered agonizing pains in the whole abdomen; they seemed to originate from the pit of the stomach, as from a centre, and shot to both hypochondres, to the lower belly to the back, and, even to the shoulders: the belly was hard, the abdominal muscles being strongly contracted, but not tumid—pulse not hurried, tongue clean, bowels slow for two days; she had ate her breakfast as usual, and had taken oatmeal porridge for luncheon; there was neither nausea or disposition to vomit, but she was anxious to have an emetic, to which I did not consent.

At 7 o'clock her pulse was 100, her skin was hot, the pain was still more urgent; some urine was passed about this time.

At 10 o'clock the pulse was 120, much smaller, the breathing hurried; shortly after this the capillary circulation began to fail.

At 12 o'clock the pulse could scarcely be felt; the head, feet and knees were cold, the face livid, and the breathing more embarrassed. Although her dissolution was now evidently approaching, there was not the least remission of pain; she moaned without ceasing; her respiration gradually became shorter, her extremities colder, her stomach never rejecting either drink or medicine; retaining her senses and intellect to the last, she gradually sunk and expired in agony at 3 o'clock in the morning.

It is unnecessary to detail the medical treatment of a case which in the short period of 12 hours hastened to a fatal termination; suffice it to say, that both general and local bloodletting, fomentations, mild purgatives, glysters in the usual form, besides those administered from a large syringe, blisters, and the warm bath, were all resorted to without delay, and pushed to their fullest extent.—They made no impression in retarding the fatal result; no discharges were obtained from the bowels, nor did an opiate, given when recovery seemed out of question, afford any respite from pain.

When I was called to this patient, the disease appeared to show all the characters of Peritoneal inflammation, a disease of which many instances had occurred about that period. The nucleus, or centre of inflammation, appeared to be seated either in the stomach or the gallducts, and the in-

flammatory action seemed to extend on the Peritoneum in every direction.—There was an unusual degree of rapidity in the progress of the disorder to a fatal termination, although vomiting and tension of the abdomen, symptoms which commonly attend fatal cases of Peritonitis, were wanting. Amongst other anomalies, I was surprised at the facility with which the stomach seemed to retain both drink and medicines in considerable quantity, and that no measures which were put in practice in the least degree arrested the progress of the disorder, or afforded the slightest mitigation of pain. I could not, therefore, but feel disappointed and mortified to lose a patient, who, twelve hours antecedent to death, had enjoyed her usual share of health, and who had taken her accustomed meals with appetite.—On these grounds I was led to conclude that anatomy alone could solve the difficulty; I was therefore extremely anxious to examine the body. An examination was obtained next day, 36 hours after death: in this I was assisted by Mr. Carmichael and Mr. Wallace—the former of these Gentlemen had seen the case about two hours before her death. The following appearances presented themselves.

Dissection.

On opening the abdomen, the stomach was found flaccid and empty, it was pursed up and divided in some measure into two cavities, by a band

of contraction, which ran perpendicularly across its anterior surface; this contraction was occasioned by schirrous indurations which followed the same direction. The contents of the stomach had escaped into the cavity of the abdomen, through a round aperture, situated at the anterior surface at the union of the cardiac and pyloric portions; oatmeal and castor oil were recognised amongst the other contents of the abdominal cavity.

The perforation of the stomach was perfectly circular, about the size of a large pea, and appeared to be the result of an ulcer on the mucous surface, which had gradually penetrated the other coats. The ulcer was hollow, nearly the size of a shilling, and had the appearance as if it had been made with caustic, with the orifice in its centre.*

There were extensive and recent signs of inflammation throughout the whole Peritoneum, investing the intestines, which appeared as if they were injected; likewise exsudations of lymph, which connected the convolutions of the intestines to each other by adhesion were observed.—The liver and spleen appeared shrunk and flaccid, not indurated; the gall-bladder contained some yellow bile; the urinary bladder was empty and contracted.

* The stomach is preserved in the Museum of Anatomy, Trinity College, Dublin.

Observations.

From this recital it appears that death took place, not altogether from the rupture of the stomach, but from inflammation of the Peritoneum, having been excited by the food and medecines getting into the cavity of the abdomen—hence symptoms of Peritonitis were the most obvious, and the most urgent, which were observed whilst the patient lived.

It is curious to observe, when these extraneous substances had escaped into the cavity of the Peritoneum, how soon they excited inflammation, and how much sooner the fatal termination occurred than in ordinary cases of abdominal inflammation, although no mortification of any organ or of any texture had taken place. It is not unlikely, however, that the complete loss of vital power in the stomach itself, which we know to be an organ of such high importance in point of vitality, had some share in accelerating the fatal result.

That the vital properties of the serous membranes of the abdomen are very much developed and exalted in inflammatory diseases, is well observed by Bichat; we know likewise that organic changes in the Peritoneum of apparently little importance, will occasion death in a very short

space of time. I have often examined the abdomen of patients who have died of Peritonitis, and have found thickening and increased vascularity of that membrane, adhesions and effusions of clear and sometimes of milky serum, besides lymph and adventitious membranes: but death takes place before any sign of mortification or gangrene appears in any of those textures.

It may be observed, that chronic inflammation of the Peritoneum is not a disease uniformly and necessarily fatal.—Such an occurrence not unfrequently ends in dropsy, as well as in other terminations; but it would appear that the serous membranes of the abdomen cannot endure so sudden a change in their vital properties, as takes place when they are the seat of inflammation suddenly coming on.

Perforations of the stomach are not necessarily mortal.—There are two instances recorded, in Thompson's account of the military hospitals in Belgium, of wounds in the stomach where the patients recovered—one was from a lance wound, the other from a bullet.—Other instances are likewise upon record. It is to be presumed that adhesion took place between the stomach and the parietes of the abdomen, which prevented the same injurious effects which took place in the case above recited, by the contents of the stomach getting into the

Peritoneal cavity. Dr. Baillie, in his morbid anatomy,* mentions that ulcers sometimes destroy only a portion of the inner coat of the stomach, and occasionally make their way through all the coats forming a hole in the stomach. There is a delineation given of this appearance ;† the plate, however, appears to have been taken from some anatomical subject. Dr. Baillie says, "he has "reason to believe that ulcers in the stomach "are often slow in their progress; they are at- "tended with pain, or an uneasy feeling in the "stomach, and what is swallowed is frequently "rejected by vomiting. This state continues for "a considerable time, and is very little relieved "by medicine, which may serve as some ground "of distinction between this complaint, and a 'temporary deranged action of the stomach.‖"

Miss H——, had long endured a diseased state of the stomach, though she was active and walked out almost every day. She often consulted me, but her attacks were never of long duration so as to require constant medical attendance. She had, however, been seldom altogether free from pain in the stomach for the last three years; occasionally it was very severe just at the pit of the stomach ;—she had been accustomed to try and relieve herself by lavender

* Morbid Anatomy, p. 144.

† Baillie's Plates, pl. 5, fig. 1.

‖ Morbid Anatomy, p. 156.

drops and other cordials, to strengthen her stomach by tonics and port wine, a practice to which she had been injudiciously advised. Under my direction she was generally relieved by applying leeches to the region of the stomach, by mild aperients and a restricted diet. On this plan of treatment she generally in a few days threw off her paroxysms of severe pain, and recovered her appetite and usual health. From the month of August until her last illness, she thought her health improving.

Ulceration of the stomach may be a disease of less rare occurrence than we are aware of; it may be induced, at least aggravated, by the injudicious use of harsh emetics, or drastic purgatives, or an abuse of the oxyds of mercury; and it is scarcely necessary to say that improper diet may sometimes give rise to it. Ulcers are more readily formed where schirrosities exist, although in the present instance, the ulcer was not found on the schirrous portion of the stomach. In opening bodies, such appearances may frequently escape the observation of the dissectors.

I make no doubt but that much injury is done by those who prescribe tonics, cordials and astringents, with a view to restore the supposed lost tone in the stomach, in Dyspeptic, Gouty, and other disorders, where the digestive powers are weak, especially where pain is present. Such a

treatment appears to me to incur the hazard of inducing inflammatory symptoms on the mucous surface of the stomach, schirrosities and ulcers, if full diet and wine be prescribed in conjunction with such treatment. The dissections of Broussais,* who found increased vascularity, ulceration and other signs of disorganisation in the stomach of those who suffered pain in that organ antecedent to death, are very important on this subject, and are more likely to lead to better pathological views of the disorders of the stomach, than the theories of our predecessors, as well as to a more judicious and a more successful treatment.

* Histoire de Phlegmasies Chronique, tom. ii.

CASES

OF

TUMOURS

WITHIN THE ABDOMEN,

BY

WILLIAM STOKER, M. D.

MEMBER OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND, ONE OF THE PHYSICIANS TO THE FEVER HOSPITAL, AND HOUSE OF RECOVERY, CORK STREET, VICE PRESIDENT OF THE ASSOCIATION OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS.
&c. &c. &c.

Read, Nov. 5, 1816.

It has been frequently remarked that improvements in medical knowledge have not been at all commensurate with the advancement of science in general, but most particularly since the period when Lord Bacon established deduction from facts, or experiments to be the only guide to useful results, in investigations or enquiries connected with the arts, and with science.

This reproach to Physicians has arisen probably in a great measure from the vast extent and variety of their art, and the consequent difficulty of

collecting information from the cultivators of the remoter parts of a field so spacious; besides ingenious men, often more impatient than supine, and in want of materials for the completion of the theories on which they were intent, have been tempted to draw on their imaginations for extrinsic ornaments, or additions of equally short duration, whose rapid decay, affecting the whole fabric, hastened the ruin of the entire system; and too generally, even its most valuable parts, have been thus lost in the confusion of the heap.

The most industrious and intelligent of those who have written on medical subjects, have recommended general attention to the observation and accurate report of remarkable cases, as the surest mode of improving the knowledge of pathology, semiotics and therapeutics, of which these adjuvant branches will probably be long deemed susceptible.

Much valuable information, derived from the observations of individuals, has been latterly preserved and recorded in the various periodical publications, which would have been otherwise lost; and though the facts so preserved might not claim distinct treatises by each observer, yet a collection of them cannot fail, when hereafter judiciously arranged, to lead to useful deduction and just theory.

From such considerations, I am induced to lay the following cases and observations before the members of this association, and shall be gratified if deemed worthy of a place in their transactions. The three first are cases of encysted tumours within the abdomen; the history of the former appearing interesting, especially when considered with reference to the singular appearances of the diseased parts discovered after death, such as ulceration and rupture of the stomach, of the diaphragn of the lungs, and of the bronchiæ, so that all of these parts were found communicated by one continuous canal. The favourable termination of the two other cases appeared to me, to have depended chiefly on the joint efficacy of external pressure, and of digitalis given internally; and the cases of aneurisms annexed, are intended to illustrate the operation of these remedies.

CASE I.

Of * * * * * * * 1808.*

24 years of age, tall and athletic. Having been called on to visit him, on the evening of the 27th October, A. D. 1808, shortly after his arrival in Dublin from Kilkenny, a distance of about 60

* About a year previously, this gentleman had a severe inflammatory fever, which was succeeded by an extensive abcess over the gluter.

miles, which he travelled in two days, I found him much oppressed with fatigue and general uneasiness; when laid in bed, he complained much of a sense of debility, and appeared much exhausted; countenance languid, eyes anxious; albugineæ and skin in general slightly jaundiced; the surface generally hot and dry; tongue white, thirst considerable, pulse 130, small and feeble; severe pain in the right hypochondrium, extending to the right shoulder and also to the epigastrium, increased by turning on the left side, on which he could not bear to lie a moment; pain not at all increased by full inspiration, and when lying in bed, the respiration seemed very little affected; some cough but neither considerable nor distressing; abdomen soft and empty, but considerable fulness and soreness over the right hypochondrium; alvine dejections frequent, but scanty, and with much tenesmus; urine also scanty, high coloured, and depositing a pink coloured sediment.—This is the 7th day since the commencement of the pain in the side, which was preceded by rigors.—About 12 days previous to the present illness, he was seized with a bilious diarrhæa at the barrack of New Geneva, where the regiment he commanded was stationed, but in the interval he was dyspeptic and costive:—He says that whilst in Kilkenny, laxatives, and a warm plaster to the painful part of the side, were directed for him; and on one night a dose of James's Powders,

which he thought moderated the feverish symptoms. I now directed his feet and also his side affected to be fomented with flannels wrung out of hot water, and finding the pain still urgent, directed that 8 ounces of blood should be drawn from the arm, (his general debility and the weakness of the pulse not warranting a more copious bleeding,) a pill composed of 2grs. of calomel, 2grs. of scammony, 1½ of ipecacuanha, and 2gts. of oil of peppermint, to be taken immediately, and its operation to be assisted by a purgative injection in an hour afterwards—to have barley water and thin oatmeal gruel for drink.

Not more than four ounces of blood could be made to flow from the orifice, yet this was very sizy; 12 leeches were then applied to the pained part of the side, and these produced a copious discharge of blood, through the greater part of the night.—28th, 11, A. M. got no sleep last night, and the sense of general uneasiness continues; pain of right side and shoulder unabated—pulse 120, hard and rather stronger, skin, tongue, and countenance little altered since yesterday; two free stools. I now directed the bloodletting to be repeated from a large orifice in the arm; and being present whilst Mr. Macklin performed the operation, and finding that the pulse became softer, and that the blood buffed very quickly, it was allowed to flow to nearly 18 ounces: almost im-

mediate relief from pain followed, so that he could now lie on either side with ease, and expressed a wish to be left to compose himself to sleep, which he felt he could enjoy. The pulse became very weak and feeble after the bleeding, and though he felt so much relieved, complained of debility, almost to syncope, attended with nausea. A saline effervescing draught was directed every second hour when awake, and a mixture with sulphat of magnesia, to be given in divided doses every third hour till the bowels be well freed.

To continue the same drinks as yesterday.

28th, 9, P. M. got some hours quiet sleep through the day, but awoke oppressed with weakness, and a sense of weight, rather than pain, in the right side, pulse 100, and feeble, thirst urgent, tongue foul.—The side and abdomen to be rubbed three times a day with camphorated oil; a blister to the pained part of the side; saline draughts, and the same drinks to be continued with the addition of imperial—ripe fruit.

29th. Got several hours sleep in the course of the night; skin cooler; tongue less loaded; pulse 88; urine more free, but some strangury; thirst still considerable; no pain, but a sense of weight in the side continues; belly costive.

A solution of sulphat of magnesia, in an infusion of senna, to be used occasionally, so as to keep the bowels regularly free; the blister which has caused full vesication to be removed, and the part to be dressed with spermaceti ointment; drinks, &c. as yesterday, and let him also drink almond milk whilst strangury continues.

During the following 13 or 14 days, the acute symptoms gradually declined, but bodily strength or cheerfulness of mind did not succeed, nor was the natural hue of his complexion restored; on the contrary, restless nights were succeeded by languor, and general sense of debility, by loss of appetite, a feeling of weight at the stomach and right hypochondre; bowels torpid, the alvine discharges excited by art were clay coloured, urine scanty and very turbid; slight rigors daily.

For these symptoms, with the concurrence of the lamented Dr. Plunket, whose assistance I had daily the pleasure of having in consultation on this case, I directed saline purgatives alternated, with calomel; and for a few days gentle mercurial friction over the right hypochondre, tepid baths; diet chiefly vegetables, fruits, or bread and cracked milk. On the 12th of November he was attacked with severe pains of the knees and ankles, attended with a high degree of pyrexia, which yielded rapidly to James's

powders, and camphor: but were succeeded on the 14th with acute lancinating pains, extending from the stomach, over the entire abdomen: and on the succeeding day, whilst under the operation of magnesia and rhubarb, assisted by enemeta, a copious discharge of blood and pus happened by stool, which was followed by sudden prostration of strength and slow pulse, the countenance becoming ghastly and pale, the appetite at the same time very keen, with a feeling of weakness at the stomach, and seemingly connected with this, he said he some times felt as if every object was sinking from his support:—the stomach was supported by broth, bowels duly freed by solutions of cheltenham salts, and enemeta.

For several days the chief attention was to support the strength which sunk very low after the copious discharge of pus and blood, which came with the fæces: the stomach at that time, became so irritable that scarcely any thing but medeira wine could be retained, and for some days it did not seem to increase fever. On the night of the 28th of November, the pains of the abdomen were attended by spasms, so violent as to cause a general writhing of the body and limbs; the breathing became oppressed, the pulse undulating, the face livid: and at midnight, after a violent fit of coughing, which threatened immediate suffocation, a considerable quantity of puriform matter amounting to a

large bason full, was ejected by the mouth, which first seemed to come from the stomach, but was soon found to be brought up by coughing only; the symptoms threatening suffocation soon afterwards disappeared, but the strength was almost exhausted—the fever ceased and the appetite became again keen; light nourishment was more freely given; the expectoration was assisted, and the discharge from the bowels promoted.

For some days the strength increased but very little; and hiccup, cold sweats, and intermitting pulse having come on, little hope of recovery could be entertained: a peculiar carneous odour was exhaled from the breath, which Doctor Percival, who attended, along with Doctor Plun-

I feel much satisfaction in being enabled to add the following note, with which I was favoured by my most esteemed friend Dr. R. Percival; it must be acceptable from his having attended on this case with me, as well as for the valuable information it contains, and the high authority of the writer;

"My dear Sir, I read your paper with interest and attention;—In cases similar to the first, hiccup has often occurred to me, and in females violent spasms particularly of the throat, before the abscess discharged itself. On that event's taking place, I have generally found, as you did, the appetite keen; I have known it indulged, though not by my advice in animal food, with impunity. The cases of tumours are very instructive.

Nov. 15, 1816. *Yours truly, R. Percival.*

ket and myself, observing, said he had lately met the same in a case where, on examination after death, the diaphragm was found ruptured—there were now daily exacerbations, and profuse night sweats.

The appetite and digestion, however, being again restored, though slowly, the strength improved in some degree, till the 30th of November, on the evening of which day, another eruption of matter by the mouth took place, preceded for some hours by increase of fever, of cough, and of dyspnæa; this paroxysm as before, was succeeded with relief of the symptoms threatning suffocation, the matter continued to be spit up freely some days, and the hectic fever again gradually declined till the 11th of December;—the report of which day was as follows.

11th December, had a restless night; skin hot, pulse 120, expectoration scanty, some pains in the right side, appetite bad, belly costive, urine scanty, tongue soft;—Omit the mixture with infusion of bark and roses, to have 4 ounces of the decoction of lichen islandicus three times a day. Repeat the expectorating mixture and pills with ipecacuanha; the infusion of cheltenham salts to be given immediately, and its operation to be assisted by an enema.—12th December, was restless and coughed much through the early part of the

night, and at one o'clock threw up a large quantity of purulent matter, after which he slept, but sweated much ; pulse now, though he is in the erect posture, is only 72 in the minute, tongue of a clear red ; three copious stools without any purulent matter, wishes for wine more freely and finds himself better after it, pulse is not quickened by its use, either hock or claret was drank the last twelve hours ; continue the decoction of iceland moss ; the mixture acidulated with sulphuric acid, and the other remedies of yesterday ; a pill composed of a grain and a half of ipecacuanha, half a grain of digitalis, and 2 grains of the extract of liquorice to be taken every night and morning.

Recovery now progressively succeeded, as after the former eruptions of matter, for several days, during which his appetite improved, and his strength increased, so that he sat up by day, and rested pretty well at night, still slight evening exacervation continued, followed by night sweats ; bowels costive requiring the daily administration of laxatives.

The intervals betwen the eruptions of matter, now lengthened, the next not occurring till the night of the 30th of December, it was preceded with a train of symptoms similar to those which have been already described ; he continued however, to expectorate purulent matter for a longer

time after this period, than after any previous one; nor was this eruption succeeded by that apyrexia, which had been hitherto so remarkable.

Excepting the addition of asses milk, little alteration was made in his diet, or mode of treatment; the iceland moss, expectorants, and laxatives were continued, the proportion of digitalis in pills had been gradually increased to one grain night and morning.

Early in the month of January 1809, by desire and much to my own satisfaction, I detailed the case to Sir Henry Halford, in order to have his assistance, who concurred in opinion, that the strength should be supported by a light nutritious diet, that the expectoration be assisted; the due evacuations of the bowels be promoted, and that in the interval, between the eruptions, a mixture composed of decoction of bark, with myrrh added during the boiling, should be tried; as soon as his state of health would permit, that he should be removed into the country air, and afterwards into a warmer climate.

From this period the disease might be considered chronic, the matter collecting so slowly, and attended rarely by any acute symptom; there was less discharged at each succeeding eruption, and the intervals increased to a month, and at one

time to six weeks; early in February he was removed to his country seat about six miles from Dublin, and I had no longer an opportunity of noting the the changes which occurred, but which now became less necessary.

For the remaining part of the winter, and succeeding spring, the intervals between the eruptions of the matter by the mouth, were in general about five or six weeks, and though he declined remarkably for a short time before, and during each discharge of matter, yet on the whole his strength and flesh had considerably increased. During this period, besides a repetition of some of the remedies already mentioned, which were thought to have served him: several others were tried in succession, such as the mineral acids, dandelion, quassia, chalybeates, alteratives, &c. I also strongly recommended a trial of the effect of an issue in the side, but it would not be submitted to; which I have much regretted.

Early in June following, this gentleman was able to travel to Cheltenham, but not finding its waters to agree with him, he soon after removed to London, that he might avail himself of the advice of the eminent physicians of that metropolis.

In February 1810, I received a letter from the

gentleman himself, dated at Penzance, in the following extract of which his state of health at that time is fully described:

"The easterly winds and frosts, I find most "inimical to me, they bring a considerable pain "in my right loin, and also on the shoulder, the "spitting on the whole, I think diminished; I "sometimes take rhubarb, and ipecacuanha pills, "I fancy the rhubarb rather binds the bowels "afterwards; I should like to hear your sugges- "tion of a medicine to open the bowels with gen- "tleness, and yet not have the tendency to bind "them, which rhubarb has, this will be the more "necessary at the Bristol Hotwells. You would "be astonished, I conceive, to behold the change "in my countenance, which has regained its "colour in a great measure, but I cannot say I "am as fat as I used to be, however, I am very "thankful to continue so well, all things con- "sidered. I can walk and that fast; the advan- "tages to be gained from this climate are merely "in the winter months, the town lying in a pen- "insula at the bottom of the bay, open to the "N. east, is particularly liable to the cold winds "and frost at this time of the year; the houses "are on a cliff, their back doors open to the east, "which adds to the cold."

He returned to this country early in the summer of 1810, and had such appearance

of recovery, as raised the most gratifying hopes amongst his anxious friends; there were, however, but too many signs of unsubdued disease, to excite the alarm of a medical observer; his natural youthful bloom had not returned, nor had his person regained its erect position, or freedom of motion. In the casual conversation which I held with him, I was sorry to learn that he was still distressed with rigours; evening exacerbations, difficult digestion, loss of rest and dyspnæa; these symptoms, however, were so slight or transient as not to prevent him from taking daily exercise on horseback, or from even entering pretty freely into society, till the second or third of September, in the evening of which day, as I since learned, he felt himself much oppressed on returning from dining abroad, and took an emetic draught, which did not operate in the usual way, but was followed by headach, delirium, and symptoms of suffocation, which continued without any abatement till death, which took place in a few hours afterwards.

Dissection.

Examination of the body by dissection, the day after death by Surgeon Macklin, and Surgeon Hamilton, presented the following appearances, which I noted at the time.

Externally, the body and limbs had no marks of emaciation; some fluctuation was to be felt on

pressing with the hand over the epigastrium, or right hypochondre.

In the cavity of the abdomen, the contents on a superficial view appeared perfectly natural, both in situation and colour; but on separating the bowels in the superior part, a purulent and grumous fluid was found diffused there, and examining more deeply, the cyst of an abscess was discovered, the interior of which was of a vascular texture; it contained a small quantity of the same fluid matter, which was found effused; this cyst extended from the left lobe of the liver, superiorly to the diaphragm; laterally to the superior part of the stomach, and to the spleen; and inferiorly to the upper part of the small intestines, so that through its intervention and adhesion, all those parts were united; the liver was much enlarged, and of a pale colour, and when cut into, was of a much firmer consistence than natural, but was not the seat of any part of the abcess, nor were there any tubercles to be found in it. Many calculi were impacted in the gall-bladder.

The stomach was worn through the greater part of the upper arch, to the parallel fibres of its internal coat, and these looked white and shining, as if macerated; and in this part, a rupture of several inches in extent had taken place.

Immediately over the lacerated part of the stomach, a large opening in the diaphragm was discovered apparently of a long continuance, as its margin was cicatrized—this extensive opening communicated with the cyst of the abscess with the stomach, and with the cavity of the thorax: nothing else unnatural was to be found in the abdomen.

In the thorax, the lungs were found adhering to the parietes of the left side of that cavity, by numerous cartilaginous excrescences.

Inferiorly the lungs adhered to the whole superior surface of the diaphragm, and immediately surrounding the ruptured aperture, had formed disorganized masses, which were now in a semi-putrid state.

The substance of the lobes of the lungs was much wasted, and a conical or funnel-shaped opening, with its base towards the diaphragm, was found to have been made by the matter passing from the abscess in the abdomen, through the lungs, to its outlet by the bronchiæ. No tubercles nor other marks of disease were found in any part of the lungs, which had not been effected by the matter from the abdominal abscess.

Some water was found effused into the cavity of the chest, mixed with the matter from the

abscess, and also with the aliment which had been recently ejected from the stomach.

The pericardium exhibited external marks of having suffered from the inflammation, and it contained more water than natural.

The heart, and all the other thoracic viscera were free from any morbid appearance.

CASE II.

Mrs. S—— Smock Alley, 2nd December, 1812, 37 years of age, had been generally healthy, till within the last three months, has had seven healthy children, but was not so well at the birth of the last child, nor did she recover as quickly as after any previous parturition; some months afterwards, her appetite, rest and strength became much impaired, her complexion failed, countenance assuming a sallow leucophlegmatic appearance, catamænia ceased: sickness at stomach, and indigestion came on, accompanied by a tendency to syncope, and aversion from usual exercise and employment in her family affairs, thirst urgent, urine scanty; within the last month the feet and legs began to swell in the evenings, but for some time these swellings ge-

nerally disappeared before morning; during the last week, however, they have been constant, and now retain the impression made by the finger. About two months since she felt a considerable swelling, which seemed to arise out of the pelvis, and which, as well as the other symptoms, she supposed to be the effect of pregnancy, till undeceived on consulting her accoucheur, Dr. Beatty. He states that on first examining the tumour he found it, elastic, not painful on pressure, occupying the left ilium, and ischium, but rising considerably above them, and from its indolence and accompanying symptoms, supposed it to be dropsy of the ovarium, an opinion which I for some time thought well founded—pulse 110, skin dry, tongue foul, the tumour extends from the left side of the pelvis to the umbilicus, the patient herself thinks the size of it sometimes much affected by flatulence, and she states, that since the swelling and other symptoms of ill health have commenced, she has been occasionally much distressed with irregular rheumatic pains. Having seen the good sffects of anti-rheumatic medicines employed according to Dr. Heberden's suggestion, in puffy swellings of the parts connected with the uterus, it was resolved that this lady should make trial of pills, composed of guiacum, calomel, soda, aloes, and oil of sasafras; to be taken each night; and a light cooling diet, and soda water to allay thirst, were directed.

December 3d, little alteration since yesterday; belly free, some rest, pulse 100, bad appetite, tumour as yesterday.

Let half a drachm of mercurial ointment, and 10 drops of camphorated oil, be rubbed well in, over the tumour each night.

Continue the pills every night.

December 6th, feels her general health better; appetite and rest improved, three alvine dejections daily, the urine very scanty, the anasarca of legs undiminished, some soreness of gums; the tumour can now be felt circumscribed round its margin, and it does not descend into the pelvis, but seems as if rising higher towards the left Hypochondre, lying deep, and adhering by a broad base to the posterior part of the cavity of the abdomen.

Omit the pills, continue the friction.

A draught composed of acetated kali, tincture of senna, pepermint water, and manna to be taken each morning, with 14 drops of oil of juniper; a bandage of flannel 9 inches broad and sufficiently long to pass twice round the middle, to be used as tight as can be conveniently borne, with a pad underneath about the size of the tumour itself, applied as a compress.

December 19th, has continued the mercurial friction till the last three days; the draughts have been used only every second day, there having been frequent slimy and grumous stools, attended with some pain. The tumour is now perfectly circumscribed, and equidistant between the left ilium and hypochondre; and the patient states that it diminishes for some time after each alvine dejection; urine copious, but turbid.

Continue the remedies, and let a scruple of mercurial ointment, with 40 drops of camphorated oil, be rubbed over the tumour each night and morning, and a pill containing one grain of digitalis, and three grains of the mercurial pill taken each night.

December 25th, the medicines have been continued regularly, since the 19th; much grumous and gellied discharge by stool; the tumour appears to be much diminished, and the crepitus of the fluid it contains, can be perceived by applying the hand over it; the bandage has been made much tighter, and is agreeable to the patient; urine still turbid, but passed freely and plentifully; pulse 90, ædema of legs somewhat diminished.—Continue the remedies.

January 6th, the pills of digitalis, and mercury have been constantly used, as last directed;

the bowels have been kept free, by the occasional use of a solution of Epsom salts, and the stools are still grumous, dark and gelatinous, but without pain; countenance and strength are much improved; the tumour is not half its greatest size; ædema much less, urine free, pulse 80, tongue cleaning, appetite improved.—Continue the remedies.

In the latter end of January following, this lady's health appeared completely restored, and no remnant of the tumour could be perceived, and she has been since healthy.

CASE III.

Mrs. F——, Mount Pleasant, aged 40, June 18th, 1813; of a bilious habit, but had been in general strong and healthy, till within the last five weeks, when her present illness, commenced, having previously suffered much mental uneasiness, bodily fatigue, and loss of rest in attendance during her mother's last illness, had borne healthy children, and catamœnia always regular; Dr. Roe, and Mr. Mc.Carthy, a respectable apothecary, who were consulted sometime after her illness commenced, and had since attended, informed me that she first complained of severe pain in the umbilical region, tending to the left

side, accompanied with the usual synochal symptoms, which mark intestinal inflammation, and with obstinate costiveness; that for these symptoms, owing to her constant anxiety about her mother's situation, she did not ask any remedy for several days, and then the bleeding, and other means employed, gave only partial relief; that afterwards a tumour was discovered on the left side of the abdomen, which had increased to its present magnitude, being about the size of an infant's head, equidistant from the ischium, and hypochondre; it is painful on pressure; bowels very costive; urine scanty and high coloured; thirst urgent; suffers much from febrile exacerbation in the evening, and through the night, relieved towards morning, by copious though partial perspiration, on the upper part of the body. Countenance anxious, debility extreme, can only lie on the back, is much emaciated, loaths all sorts of food. Tongue and fauces of a bricky red, and interspersed with phagedenic aphthæ; pulse 130, small and feeble; extremities cold. The abdomen to be rubbed as often as the pain is urgent, with a liniment composed of camphorated oil, tincture of opium, and vitriolic æther; the mouth and throat to be gargled often with solution of borax and honey in water; a mixture of castor oil suspended by means of muculage of gum arabic in water, to be taken every hour, assisted by enemata, till the bowels

are freed, and a pill of 2 grains of hyoscyamus, and 2 grains of camphor at bed time.

Continue gruel and barley water, and whey for drink, a little wine and water, when the sense of weakness is distressing.

June 19th, the oily mixture and enemata caused a discharge of scybalous fæces with much pain; the friction with the liniment gives some temporary relief, and she gets a little rest in the night; the tumour and other symptoms as yesterday; pulse 130, still small and feeble. Continue the remedies.

June 20th, several grumous alvine dejections, with scybalæ, produced by the oily mixture, and enemata; urine passed more freely, and is turbid; got some rest, and can lie a little on the left side; still much pain in the parts of the abdomen surrounding the tumour; the tumour itself undiminished, aphthæ on the tongue look better, extremities of more natural temperature: pulse 120, and firmer, feels less loathing to food. Let her have some chicken broth, and let half a drachm of mercurial ointment, and half a drachm of camphorated oil, be rubbed over the tumour each night; a pill of half a grain of digitalis, three grains of aloes, and one grain of capsicum, twice a day.

Let a pad of flannel the extent of the tumour, be tied over it, and a bandage of flannel be passed twice round the middle, to be tightened as she can bear it; the gargle, liniment, and enemata to be continued.

21st. The same grumous discharge continues from the bowels; less pain, can bear pressure on the tumour better, the bulk of the tumour a little diminished, and feels less pain.

Pulse 110, urine free, but turbid, takes food with some appetite.

Continue the bandages, and the remedies; 22nd, 23rd, and 24th, gradually improving as to every symptom, except the bulk of the tumour, which was stationary.—The same medicine to be continued.

25th. Some griping pain in the abdomen, and copious discharge of slimy grumous stools, with scybalæ; pulse 120, but fuller; strength much increased, so that she can assist herself to rise out of bed; tongue and fauces almost free from aphthæ.—Two table spoonfuls of the mixture, with caster oil every second hour, assisted by an emollient enema, till the bowels are well freed; then an anodyne glister; the belly to be stuped with flannels wrung out of hot water and spirits.

The bandaging and the friction, with the liniment of camphorated oil, tincture of opium, and æther to be continued; the other medicines to be omitted.

26th, Frequent green acrid stools, with much griping, and tenesmus; much distressed with acid eructations and cardialgia. Pulse 128, rest interrupted by the griping, but feels relief for a short time after each stool; a mixture of magnesia alba, with fennel water, and Hoffman's anodyne liquor, to be taken as long as the heartburn and griping are troublesome; a pill of one grain of digitalis, one of ipecacuanha, and two grains of ext. of hyoscyamus, to be taken each night; continue the bandage and friction, with the liniment. These remedies occasionally alternated with laxatives, and occasionally with anodynes, as the symptoms of pain, griping, or tenesmus were urgent.

Under this plan of treatment, health gradually returned, and the tumour having been diminished to less than half its greatest magnitude, remained stationary, but without producing any farther inconvenience; nor has this lady had any return of indisposition since, till within the course of the last summer, when she was seized with a high degree of ephemeral fever, on the crisis of which she found, removing her bandages, which had

been constantly worn, that the remnant of the tumour had entirely disappeared; this crisis was attended by no remarkable discharge, besides that of copious perspiration.

Observations.

The history of the first Case, considered with reference to the subsequent examination after death, is not, I trust, totally devoid of pathological instruction; yet it must be confessed that it leaves the ratio symptomatum still defective, but most remarkably so at the commencement of the disease, when so many characteristics of hipatitis were present that the liver would be thought most probably to be the part in which the inflammation originated, but though the dissection does not entirely disprove that opinion, at least it does not confirm it.

Less doubts, however, arise with respect to the more advanced stages, for then the suppuration of the abdominal tumour, and its subsequent irruption, first into the alimentary canal, and afterwards through the diaphragm and lungs, as is ascertained to have happened, may, I think, be considered as the adequate and probable causes on which all the succeeding symptoms depended.

An opinion differing from that expressed by

Doctor Plunket, Doctor Percival, and myself, as to the origin of this disease, was said to have been given by some justly eminent physicians, whom this gentleman consulted whilst in England, which might be easily accounted for, by considering the complete change of symptoms which took place subsequent to the rupture of the diaphragm: because those physicians, seeing only that train of symptoms which generally arises from affections of the lungs, stated their opinion that the disease, both in its commencement and progress, existed in the thoracic viscera alone, whilst we, who witnessed the symptoms at an earlier period, had no doubt of its having originated in the abdomen, and from thence we traced its progress.

It may not be considered irrelevent to mention here that several observations which I had an opportunity of making in the course of the last winter at the Anatomical Theatre in Peter-Street, tended to prove, that diseases of the lungs are very often derived from affections of the abdominal viscera.

Having been apprized, through the kindness of my friend, Mr. Daniell, the intelligent assistant to Mr. Kerby, when any morbid appearances presented themselves, which might be illustrative of the lectures I read on the Practice of Physic; on such occasions, I often noticed that in those who

died before the age of puberty of the genuine Phthisis Pulmonalis produced by scrofulous taint, the tubercles were largest and most suppurated on the superior parts of the lobes of the lungs, diminishing as they descended more deeply towards the inferior parts of them; but that in those who after arrival at adult age, fall victims to pulmonary diseases, the original taint could often be traced from morbid states of the abdominal viscera, and in such instances the phlegmons were always largest and most maturated in the inferior parts of the lungs.

The number of such observations, indeed, would not warrant indulgence in generalization from them, but should the same appearances be more frequently observed by others, the deductions from them might be of useful application both in theory and practice.

A review of the histories of these three Cases, as connected by some symptoms, which were common to all of them; and also of the appearances on dissection, affords additional proof that even very considerable openings by ulceration into various parts of the cavity of the intestinal canal, may be succeeded by recovery and regeneration of the parts destroyed; thus there can be little doubt from the quantity of matter passed per annum in the first Case, and the direct connection

between the grumous discharges, and the state of the tumour in the other two, that such openings, though perhaps differing in extent, had taken place in all, yet no apperture was to be found by careful examination after death, of the body of the first patient, and the state of health which the other two have since enjoyed, may be supposed to imply a similar regeneration of the parts in these cases also.

How far the successful terminations of the last two Cases, are attributable to the remedies employed, or which of them was most effectual, may perhaps be determined from the foregoing detail; some benefit appeared to me to have been derived from the alternate administration of anodynes and laxatives, but I was disposed to think that the removal of the tumours, and consequently the diseases excited by them, was chiefly effected by the external pressure, aided by the use of digitalis; an opinion founded also on other cases in which these remedies seemed to co-operate: and I shall now beg leave, before I couclude this paper, though I fear I have already trespassed too long on the patience of the Society, to give a very brief relation of two cases of aneurisms successfully treated by pressure and digitalis administered internally, which, though not strictly analogous, yet being external, and perhaps the least complex form of vascular distention, the ef-

fects of remedies on them were the more observable.

CASE IV.

M. M——, Merchant, 34 years of age, very plethoric, consulted me in the year 1803, on account of dyspnea, cough, febrile exacerbation, palpitation of heart, flushing of face and incubus; his pulse full and rebounding; he had some time previously been under Mr. Richard's care, on account of a tumour, which on examination, I found to be an aneurism of the gluteal artery, on its passing outside the pelvis, and had acquired the size of an orange. Besides other remedies, Mr. Richards applied a compress over the aneurism, which had been kept on several weeks, and had prevented its further extension, but without any diminution of it. As the patient refused my request to have a consultation, I directed him to continue the pressure, as ordered by Mr. Richards, and besides a light vegetable diet, and gentle laxatives, I directed digitalis in pills in such quantity as produced a decided effect in moderating the great and general vascular action, and consequently the symptoms connected with it. The size of the tumour soon began to diminish very sensibly under the continued pressure, and in less than fourteen days, was enirely removed;

nor has there been since any return of either the general or local complaints.

CASE V.

Mr. S——, Bookseller, Abbey Street, 25 years of age, was affected in the spring of 1808, with a severe attack of pneumonia, on account of which, besides other remedies, I directed V. S. freely. In about three weeks after convalescence he called on me to show a tumour, which formed in the flexure of the left arm, and which, on examining it, I found to be an aneurism of the brachial artery, with strong pulsation—pulse at the wrist of the right arm very full and quick. He had become even more pletheric than he was before his late attack of pneumonia: the accompanying symptoms were so very unpromising, that my friend Mr. Crampton was consulted on the same day; and in consultation with him, it was determined to make trial of external compression, whilst digitalis should be administered, as in the case of *Mr. M.* in which I believed it had been beneficial.

The effect of the powders of digitalis in this case, given to the quantity at first two grains daily, and gradually increased to four grains per diem,

was apparent in diminishing the violence and frequency of the arterial action; and the pressure being continued, and adapted by Mr. C. to the circumstances of the case, the aneurismal sack was entirely obliterated in less than 14 days. I have very lately learned that this gentleman was carried off by pectorial disease, in the course of last spring, and that on examination of the body after death by Dr. Harty, the heart, and aorta were found much enlarged.

Postscript,

Subsequent to this paper being read to the Association of the Members of the King's and Queen's College of Physicians in Ireland, Mr. Young's publication of his successful mode of treating cancerous tumours was put into my hands by my friend the Surgeon General—the coincidence of Mr. Young's views and mine appear very striking, and is the more remarkable, as from the dates of the cases given by us, respectively, previous communication could scarcely have taken place; and that there was similarity between the tumours, successfully treated by Mr. Young, and by me, I think is rendered more probable by the reported failure of the same remedies, when tried by Mr. C. Bell* of the Middlesex Hospital, on tumours purely cancerous.

* See Mr. C. Bell's Reports, No. 1.

CASE

OF

SUPPURATION

OF THE LIVER,

BY

JOHN O'BRIEN, M. D.

A FELLOW OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND, AND ONE OF THE PHYSICIANS TO THE FEVER HOSPITAL, CORK-STREET.

Read, Nov. 4, 1816.

I BEG leave to read to the Society, the particulars of a case of extensive Suppuration of the Liver, which occured some time since, in a patient under my care in Cork Street Hospital.

Bridget Lawler, aged 18, was admitted into the hospital October 11th, 1815.—On examination, her situation was found pretty nearly as follows. An enormous swelling and tension of the whole epigastric region, with pain in the right side, much aggravated by inspiration or pressure. The tension, though more remarkable and painful in the epigastric region, appeared to extend

over the whole abdomen, which was sore and tender to the touch; the pain of the side, she described occasionally to shoot up to the scapula, and shoulder, and she complained of weakness and deadness of the right arm.

The tumour of the epigastric region presented no resistance to the touch, nor appearance of hardness, and occupied the whole triangular space between the lower ribs and sternum, with considerable elevation. Her countenance was pale and anxious; pulse small and feeble, about 120 in a minute—she had no vomiting, nor yellow colour of the skin.

The history she gave of her illness was, that about eight days before, she had eaten a very hearty dinner of salt pork and greens, and then took several draughts of buttermilk, after which she said she felt a hard lump in her stomach, which has never since quitted her; she had been a servant, and said she had been healthy previous to this, though never very strong—she was rather of a delicate habit, and declared she had never been addicted to drinking.

As my chief object is to point out the symptoms of disease during life, and the appearances after death, in this case, I shall not detain the Society with a minute detail of the medical treat-

ment adopted; but shall content myself with such a general outline of the reasoning, and consequent plan of treatment, as is necessarily connected with a description of the progress of the disease. Although the symptoms above described, pointed out with sufficient certainty the presence of violent disease of the liver, the nature of the epigastric tumour was not at first so evident—the equable tension of the abdomen, not giving sufficient limitation to the abscess, to define it distinctly.—The tumour might arise from a flatulent enlargement of the stomach, or colon, or might be an abscess; under these circumstances of doubt, a strong purgative, together with frequent fomentations of the abdomen, were at first directed, a large blister also was applied to the right side. By these means the pain of the side was much relieved, and the abdominal tension so far reduced on the 3rd day after admission, that the limits of the abscess were then quite distinct, and its existence no longer doubtful.

From this time forward, my efforts were directed, to promote, if possible, the absorption of the matter. For this purpose a constant discharge was kept up from the bowels; and pretty large doses of calomel, joined with opium, were given every night.

On the 7th day after admission, her mouth was a little sore, but the epigastric tumour was still

stationary, though in other respects she had not retrograded.

Conceiving now that no resource remained but an external opening for the discharge of the matter, and willing to be supported in this measure, by the opinion of the other physicians at that time in attendance at the hospital, I requested a consultation with my esteemed friends and colleagues, Drs. Barker and Robinson, and Mr. Rooney, our surgeon, who on examining the patient, were unanimously of opinion, that the abscess should be opened externally. The tumour extended at this time from the sternum, to within an inch of the navel, perpendicularly, and laterally to the margin of the lower ribs, on each side. The operation was performed by Mr. Rooney; an opening being made with a lancet in the lower part of the abscess, and about four pints of a dark brown or coffee coloured fluid, occasionally mixed with pus, were drawn off from the wound.

On the 6th day after the operation, the patient died—she langished for the interval without much change, affected, however, with rigors, and strong hectic fever, with very laborious respiration—her strength was supported with a moderate quantity of wine and bark, and an opiate was given every night.

Dissection.

Having obtained permission from her friends to open the body, the dissection, which was performed by my friend, Mr. Thomas Rooney, in presence of the gentlemen above mentioned, presented the following appearnces.

On opening the abdomen, the intestines were found perfectly sound and free from disease, nor was there any appearance of inflammation in the lower part of the abdomen, nor any unnatural fluid in its cavity. The stomach was found filled with a thin fluid, supposed to be the whey the patient drank some time before death; it was found free from inflammation, except about the middle of its lesser arch, where it adhered to the extent of about a crown piece, to the base of the abscess. The abscess itself being cut open, we discovered its cavity involving the greater part, perhaps two thirds of the entire substance of the liver. The whole convex surface of the right lobe, and part of the left, to a considerable depth were destroyed, and presented a jagged appearance, when the liver was taken out and washed, as if the part had been dug out, and torn by a rough instrument. The abscess then extended backwards, between both lobes, and comprehended the gall-bladder, and ducts in its cavity,

which were nearly obliterated; only a small remnant, about one sixth of the gall-bladder, remained undestroyed, and the corroded ends of the ducts only were visible. This immense abscess was completely bounded on all sides by adhesions, and there was no appearance of communication with the lower part of the abdomen. The chest was not examined, but on thrusting up the hand through the diaphragm, no adhesion of the pleura was felt; the spleen was enlarged and indurated; and the portion of the liver which remained, was interspersed on its surface, with small yellow tubercles, at a distance from each other, and not by any means so numerous as might be expected from the diseased state of the liver. It was sent in this state, to Doctor Macartney, professor of Anatomy, who, with his usual zeal for science, has preserved it; and it is now exhibited in his collection in the Theatre of Anatomy in College.

Observations.

In warm climates, and particularly in India, where acute hepatitis is endemic, there are many examples of very extensive suppuration of the liver, by which this organ is converted into a mere shell or bag of pus; there is a curious specimen of a liver, nearly in this state, in the collection of Doctor Macartney. Even in Switzerland and

Italy, the writings of Bonetus,* and his successor Morgagni, † afford some extraordinary cases of this kind; but I do not recollect to have met in any medical writer, an example of so extensive and rapid a suppuration in our climate, as that above described. Doctor Baillie, indeed, mentions, that a suppuration of the substance of the liver is very rare in our climate, and Hoffman, who lived nearly in the same latitude, wrote a treatise whose title is "de Inflamatione hepatis *vera raris-* "*sima* spuria autem frequentissima."

From the many cases of acute hepatitis, attended with unequivocal symptoms of suppuration, which have occurred to me in the last six years among the poor of the Liberty, and from the small number of recorded cases of this kind in the English medical journals, I am inclined to think this disease of more frequent occurrence in this country, particularly among the lower classes, than in England, or perhaps any other neighbouring country. This, if well founded, probably arises from their habits of life, their poverty and bad diet, and their unhappy propensity to ardent spirits: also perhaps from the greater dampness of our western atmosphere. In India, the heavy dews of the nights which are colder than the days, together with high living and intemperance, are consi-

* Sepulchutum anatomiæ de tumoribs hypochondrü.

† De sedibus et causis morborum. Tumor hypoch.

dered to be the principal exciting causes of the disease; and it has been observed in general to come on after a debauch, when cold has been applied to the surface of the body.

In India, the rapidity with which inflammation of the liver runs to suppuration, has sometimes been so great, as scarcely to admit of time for the employment of the usual antiflogistic remedies.* The case above described, is a striking instance of its rapid tendency to suppuration even in our climate, and points out the necessity of the utmost promptitude in the measures taken to arrest its progress.

From the history given by this patient of the commencement of her illness, and which was confirmed also by her father, it would appear that the inflammation in this case was excited by the pressure of a distended stomach, filled with hard indigestible food, on the liver, already probably considerably indurated and diseased. At least, although we may suppose some other causes in operation at the same time, as cold, fatigue, &c. it is impossible not to admit the pressure of the stomach as the principal one. This poor creature, it appeared, had only recently gone to service, and having got suddenly into comparative plenty

* See Doctor Curry's letter to Doctor Saunders; and Mr. Christie's, in 2d Vol. Medical and Physical Journal.

from a state probably of want and starvation, had gorged herself with an immoderate quantity of food, which by the impediment afforded both to respiration and the circulation of the liver, probably produced the effects above described.

A Case analogous to the present, and strongly illustrative of it, occurred to me shortly before it. It was that of a woman in whom suppuration of the liver occurred immediately after, and was apparently produced by pregnancy. She was an out-patient of the Meath-Street sick poor institution, in June 1815, and attended by the late Surgeon Barlow, and myself, with great solicitude.

She stated that she had been delivered of a large child at the lying-in hospital, about three weeks before, and had been affected, some time before and since delivering, with a violent pain in the right side. On examining her side, I discovered an abscess about the size of a small tea-cup projecting forward on the margin of the lower ribs on the right side. Conceiving it a very favourable case for an operation, the abscess was opened by Mr. Barlow, and a considerable quantity of pus discharged. From the healthy appearance of the pus at first discharged, we entertained sanguine hopes of her recovery; these hopes, however, were not realized; she died in about two months after

the operation—we were not permitted to open the body.

I adduce this case merely as an example of the effect of pressure on the liver, as there was a high degree of probability that the disease in this instance had been excited by the pressure of the gravid uterus communicated to the liver.

As the schirrous and indurated states of the liver are generally considered to arise from an inflammatory action of weaker degrees of activity, than the suppuratory inflammation, we may conclude by analogy that the pressure of the stomach is a frequent occasional cause of this diseased state of the liver also.

Although it is true, that certain substances, as ardent spirits, high seasoned food, &c. have a direct power, even when taken in a moderate quantity, to produce this diseased action of the liver, yet it is probable that in many instances the quantity of aliments in general, assists the noxious quality of some, in producing this effect.

The powers of mercury in diseases of the liver have been so ably discussed by Doctor Saunders, and lately in the ingenious work of Doctor Farre, that nothing remains to be added on that subject.

I believe it is now pretty generally agreed, that where any material disorganization has taken place, this remedy is productive of more harm than good. A practical inference, therefore, suggests itself, from the remarks above made; namely, that the remedies for subduing inflammatory action, particularly general, or at least topical bloodletting by cupping or leeches, should never be neglected, in chronic inflammation of the liver, even in those cases where mercury may subsequently be thought advisable.

A practical question, also, of much importance presents itself here, namely, how far the artificial opening of hepatic abscesses is ever attended with benefit to the patient? Many cases are recorded in the writings of the old physicians, in which this measure had complete success; one in particular, by the celebrated Ruysch,* of a student in surgery, who laboured under the usual symptoms of induration of the liver, which he says he brought to a suppuration, by exernal applications, and finally opened with a fortunate event. The two cases above described, however, afford but little encouragenent for the success of this operation. Where the abscess is not merely confined to the investing membranes, but involves the substance of the liver to any extent, it is probable an opera-

* Observations Anatom. Obs. L.

tion will never succeed; and I think it is doubtful whether it does not hasten the patient's death, as the sanious unhealthy discharge is likely to become more acrid by the admission of air to the cavity of the abscess. This state of the discharge is well described by Hippocrates, "quorum hepar suppu-"ratum aduritur, si pus purum et album effluxerit "evadunt, si vero qualis amurca fluit pereunt." *Aph.* 46. *S.* 7.

In those Cases, I am apt to think it the safest course, merely to assist nature by emollient applications, in her efforts to discharge the matter externally, or at least, to delay an operation as long as possible.

DISSECTIONS

OF

TWO HABITUAL DRUNKARDS,

BY

SAMUEL BLACK, M. D.

MEMBER OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, &c.

Read, Nov. 4, 1816.

THERE is no tendency of the mind which it is more expedient on all discursive subjects to recollect and to restrain, than the tendency to generalize. Man is impatient to arrive at general conclusions; and the establishment of *principles* is gratifying to the pride of human intellect. But it is a tendency against which it is peculiarly incumbent on those who are engaged in pathological inquiries, or indeed in the investigation of any department of knowledge, to arm themselves with a degree of caution. This reflection is suggested by the perusal of the two following dissections: the persons who were the subjects of them, were

both habitual drunkards, one would therefore expect, reasoning *a priore*, to find the appearances in both bearing a very close resemblance; but the appearances were considerably diversified. There can be no question, that the same cause, operating under the same circumstances, will always produce the same effect: but the great difficulty, for the most part, is to discern, and to ascertain wherein the circumstances under which causes are brought into operation, are the same, or different. In the present case, this difficulty does not exist to an unlimited extent. In the one case, the liver is reduced to less than half the natural size, and studded with tubercles; in the other, it is increased beyond the natural size, and studded with tubercles: but there is superadded what I consider as a real schirrus of the stomach. Certain differences in the circumstances of these two persons are easily assigned, one, for instance, was aged 63; the other, only 27: in one, the habit of intoxication had been completely established for fifteen years or more; in the other, only for two or three years. How far this diversity of circumstances can be applied to illustrate the diversity of observed appearances, or what share must be ascribed to other circumstances not so obvious, nor so easily assignable, I shall leave to the learned members of this association to decide: I think, however, that it may not be unsuitable, or ill-timed, to quote an observation of Dr. Baillie

on this subject. Speaking of the common tubercle of the liver, he says: "This disease is most frequently found in hard drinkers, although we cannot see any necessary connexion between that mode of life, and this particular disease in the liver. It happens however, very commonly, that we can see little connexion between cause and effect, in changes which are going on in every other part of the body." To which observation of Dr. Baillie, I shall take the liberty to subjoin a reflection of Cicero, "Sufficit si quid fit intelligamus, etsi *quo-* "*modo* quidque fiat ignoremus."

CASE I.

July 12*th*, 1808.

Patrick Mooney, aged 27, a journeyman baker, and accustomed for the last two or three years, to indulge in long protracted fits of drinking, as often as ever he could command the opportunity. He had been liable, for a considerable length of time, to a variety of stomach complaints, such as acidity, flatulence, vomiting, &c. These were exceedingly aggravated about six months ago, by a long and hard drinking of rum: his feet and legs now swelled, and within the last month, he has been twice tapped. He died this morning, and I opened the abdomen twelve hours after death. The only very striking morbid appearance, was in

the liver, but the state of that viscus was very remarkable: it certainly was not one half its natural size, perhaps not much more than one third; its substance, when pressed between the fingers, felt perfectly hard and rigid, and was throughout full of small hard tubercles, of the size of a garden pea, some of them larger; they were of a dark brown colour. The substance of the liver being cut into, showed its parenchyma as completely beset by these, as its external surface was; none of them shewed any tendency to suppuration. The gall bladder had a shrunk, and shrivelled appearance, and contained scarcely any bile. The pylorus appeared rather thick, and indurated.

CASE II.

June 18*th*, 1812.

James Finlay, aged 63, a shoe-maker. He has been for the last fifteen years an habitual drunkard, and for a great proportion of that period, had enjoyed better health than could have been presumed, or anticipated from his habits of life. Within the last eighteen months, however, he began to be affected with a variety of stomach complaints, such as loss of appetite, nausea, acidity, flatulence, obstinate costiveness, pyrosis and vomiting. These continued to increase, and for the last six months, scarcely any solid food could be taken, and the little that was occasionally swallowed, was almost

immediately rejected by vomiting. Wine or spirits, undiluted, remained on the stomach better than any thing else. A hard tumour, or ridge, appeared now to stretch across the the epigastric region, from the right to the left hypochondre, and the feet and legs became oedematous. For the last four days, he lay in such a state, that it was often difficult to say whether he was living or dead. Neither pulse nor respiration were to be discerned, except perhaps twice or thrice in the twenty-four hours, and then only by the most minute attention. This death-like state, "con-"sanguineus lethi sopor," was at the end of four days, exchanged for a placid, but real death.—Doctor Macartney, the professor of Anatomy, in this University, who was casually on a visit in the neighbourhood, had the kindness to open the body about sixteen hours after death.

On cutting through the integuments, there was a considerable serous effusion into the cavity of the abdomen. The liver appeared considerably enlarged, especially the left lobe, on the surface of which, a number of tubercles appeared. These when cut into, were of the size of a hazel nut, of a yellowish colour, and a granulated appearance, but did not contain any puss. None of these tubercles were discoverable on the surface of the right lobe; but when a section of it was made, its parenchyma abounded with them. The liver

stretched quite over into the left hypochondre. The gall bladder was pale, small and quite empty. The spleen appeared rather more rigid than usual, and the entire viscus was not one half its usual size; yet when a section of it was made, its internal structure did not appear very materially altered. But the most remarkable circumstance of this dissection, was the condition, and appearance of the stomach: this organ was so small and contracted, that its cavity would not, I think, have contained a turkey egg. The coats of it were thickened, and indurated in a very extraordinary manner. Their original organization seemed entirely obliterated, and they had all coalesced into a solid homogeneous substance, which in some places, was half an inch thick, in others, three quarters of an inch. This substance, in structure and appearance, resembled cartilage, softened, more than any thing else I can compare it to: the pylorus, with difficulty admitted the end of the little finger, the interior surface of the stomach, abounded with several appearances, to which (for want of a better,) I shall give the name of fungous excressences: some of them were broader than a ten-penny piece, and from their surface, there ouzed a dirty brownish fluid.

I conceive this to be the same appearance to which Dr. Baillie (when speaking of the schirrous stomach,) alludes in the following passage:—

" Sometimes the inner membrane of the stomach,
" throws out a process, which terminates in a great
" many smaller processes, and produces what has
" been commonly called a fungous appearance."

CASE

OF

GOUTY AFFECTION,

BY

SAMUEL BLACK, M. D.

MEMBER OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, &c. &c.

Read, Jan. 9, 1817.

THE Rev. J. F. aged 33, has had two attacks of regular gout, which he inherits. The first occurred about four years ago, at which time he had a regular fit which continued fixed in the extremities for a month. About three years ago, he had a second fit, in all respects regular, which lasted for a fortnight.

About the first day of May last, he complained to me of a severe and distressing pain in the lower part of the spine, which he said had been uncommonly troublesome, for the last three months.

On the 6th of May, he had an attack of gout in the right great toe, where the inflammation lasted 48 hours. It was then transferred to the great toe of the other foot, and having subsisted there about 36 hours, it disappeared. A slight degree of swelling, with much tenderness, remained for some days. As long as the feet were affected with the gouty inflammation, the back remained free from pain; and when the inflammation receded from the extremities, the back became again violently affected. The pain extended to the hip joint on each side, and occasioned a considerable degree of lameness in walking. Symptoms of constitutional derangement now supervened, such as sickness and loss of appetite; frequent sourness of stomach, excessive flatulence, and frequent bilious vomitings. When matters had proceeded in this train for about five weeks a swelling appeared below the left hypochondre, rather higher than the umbilicus, but extending towards it. This tumour appeared at first to come and go, or at least to increase and diminish in a remarkable manner. It was painful on pressure, impeded full inspiration, and when pressed upon, gave that crepitus which is indicative of the existence of flatus underneath. For the last five or six days, it has become very fixed and permanent. It is now as broad as the hand, and extremely impatient of pressure. My learned friend, Doctor M'Donnell, of Belfast, was this day called into consultation.

His opinion with respect to its nature and seat was sceptical, but he quoted an observation of Doctor Rush, of Philadelphia, that he had frequently observed the spleen to vary considerably in size, from time to time. I ventured to suggest that it was seated lower than the spleen; as there was a space of two inches between the margin of the ribs, and the superior edge of the tumour. I had an idea that it was seated in the arch of the colon, more especially, as pressure or friction, generally excited that crepitation which confined flatus gives. But it must be acknowledged, that, as to its nature, and exact situation, much uncertainty prevailed.

Medicine had not hitherto been productive of any advantage; and in detailing the further progress of this disease, I do not consider it necessary to detail the daily prescriptions, with their effects. In a case in which I apprehend no prescription could have been successful, such a detail consumes time, without conveying instruction. I shall however, observe in general, that frequent leeching, the maintenance of a purulent discharge from the part, and keeping the gums tender for some time, by means of calomel, constituted the leading features of the plan of treatment, and that urgent symptoms were palliated in the manner that seemed most expedient.

June 25th.—This morning, a considerable degree pain, with a sense of heat and throbbing, have come on in the great toe, which is perceptibly inflamed.

26*th.*—The symptoms of inflammation in the great toe, having subsisted about sixteen hours, were then translated to the great toe of the other foot, from whence they soon receded.

27*th.*—The effort was made to favour the natural exertions of the constitution, by sinapisms and stimulating fomentations, applied to the extremities. This was several times repeated, but always without success.

28*th.*—Great increase of pain in the tumour, so that the patient cannot lie on the left side, owing to the pressure to which it is then exposed; neither can he lie on the right side, owing to the sense of weight, and dragging, excited by that posture. Pain of the back, though urgent, yet obscured by that of the tumour, which increases in size, and is now distinctly to be felt immediately above the umbilicus, extending to the left side. Much crepitus on pressure. Some bilious vomiting this morning. Pulse 106.

29*th.*—About this time, he was visited by my highly esteemed friend, Doctor Crawford, of Lisburn, with whose sagacity, discernment, and sound

judgment, frequent intercourse has rendered me familiar. He however, felt the same difficulties, with respect to the nature and seat of the tumour, that I did. There is now great increase of pain in the tumour, which the patient thinks is enlarging in a direction downwards, and backwards, accompanied by a sense of fullness and tightness that greatly impede respiration. Great debility. Pulse, as he sits upright in bed, 132. He lives now entirely on milk, ripe fruit and bread, the only aliment which the stomach retains well.

July 9th.—For the last two days, he has complained much of a troublesome sense of fullness and tension in the abdomen, in which I fear there is some obscure fluctuations. Urine very scanty. Severe palpitation from the slightest exertion.—Pulse in the recumbent posture, 124: in the upright, 136.

10*th.*—Was attacked early this morning by laneinating pains, of uncommon severity, through the tumour. Tension and tenderness of the part very great. When he attempts the upright posture, he finds the respiration greatly affected, and becomes faintish. General tension and fullness of the abdomen greatly increased. Fluctuation no longer obscure, notwithstanding the use of digitalis; the supertartrite of potass and other diuretics. Pulse in the erect posture, 144, respiration 25.

14*th*.—The tension of the abdomen, and the various distresses connected therewith, having increased to such a degree as he declared to be quite intolerable, an attempt has been made, at his own urgent request, to afford some relief by the paracentesis, and about five quarts of serum have been discharged. But the relief is altogether imperfect.

18*th*.—Died this morning at 4 o'clock.

The Dissection.

The body was examined ten hours after death: I was assisted in the examination by my friend, Mr. Salmond, Staff Surgeon.

When the abdominal cavity was laid open, the attention was instantly arrested by an immense tumour which presented itself: It was of the size nearly of a man's head, extending from the left hypochondre, to the os ileum. It appeared originally to have sprung from the mesentery, but was now intimately connected, by adhesion, with all the circumjacent parts: it was of a whitish colour, internally soft and pulpy, and on a general, and distant inspection, exhibited very much the appearance of brain: it appeared to me, to belong to that species of tumour, to which Mr. Abernethy has given the name of medullary sarcoma; in this

seat of this disease, is for the most part, external, and I am uncertain whether there are on record, any instances of its existing, as an original disease, within the abdominal cavity. A very usual seat of it is the testis, in which situation it has been denominated by some, the soft cancer, a term which Mr. Abernethy considers very objectionable, as conveying an erroneous idea; for the disease, though perhaps equally destructive, is unlike cancer in its nature and progress. Mr. Abernethy has given an account of two cases in which the disease was propagated from external parts, through the medium of the lymphatics, to the glands within the abdomen. In one of these cases, the disease had commenced in the testis, had communicated from that to the inguinal glands, forming on each side a tumour, as large as a man's head; and on opening the body, the pelvis was almost filled with similarly diseased glands, and the vertebræ were hidden by others, as high up as the diaphragm, and which contained a fluid resembling cream. In the other case, a tumour had formed on the front of the thigh, and the inguinal glands became enlarged. The body being examined after death, the internal iliac glands, more than filled one side of the pelvis, rising out of it in such a manner as to distend the lower part of the abdomen, into a great tumour, which had been very remarkable opinion, Mr. Salmond perfectly coincided. The

during life. The tumour of which I am now giving some account, appeared to me to have derived its origin from the glands of the mesentary, some remains of which, I thought were still discernible, but so confusedly blended with other parts, so altered in structure, and defaced in appearance, that it was with some difficulty they could be recognized as the remains of a glandular structure.

On being handled, there issued from different parts of the tumour, a fluid, in colour and consistence resembling cream; the tumour had a very broad adhesion to the peritonæum on the left side of the spine; it was also connected with the colon. It was cut out as completely as its universal connection with the neighbouring parts rendered that practicable, and being suspended on a steel yard, it weighed nearly six pounds.

On cutting into it, the kidney was found imbedded in its center; and what is very remarkable, the structure of that viscus was perfectly entire. The caput æcum coli was amazingly enlarged, and the enlargement consisted in a great quantity of a pulpy substance, the same in appearance as that which constituted the mass of the tumour already described.

The whole tract of the intestinal canal exhi-

bited the most decisive marks of general inflammation; universal adhesion had taken place thro' all the viscera, so that it was a matter of extreme difficulty, or rather an impossibility to disentangle them, the one from the other. The convex surface of the liver adhered through its whole extent to the peritonæum, the diaphragm, and the stomach.

The liver itself, was unusually large, and extended to the left hypochondre; but its organization appeared to be entire.

The gall bladder was filled with a black and viscid bile, in colour exactly resembling tar, but of a thinner consistence; the spleen was of the ordinary size, and its structure was no way diseased: it had a very extensive adhesion to the diaphragm, and the adjacent peritonæum: the omentum did not appear distinctly, as a separate membrane, owing, undoubtedly to the very intimate adhesions formed between it and the other viscera.

The adhesions between the viscera were so extensive, indeed so universal, and there were so many livid blotches of a gangrenous appearance, and of a great extent, scattered over the whole tract of the intestines, that these circumstances, added to the tumours already described, presented a scene of universal ruin and confusion.

There was a considerable serous effusion into the cavity of the abdomen; the thoracic viscera appeared to be remarkably sound, but there was an effusion to the amount of four onnces, into the pericardium.

A

CASE

WHICH SHOWS THE INFLUENCE OF

HEPATIC DISEASE

OVER THE FUNCTIONS OF THE UTERUS.

BY

THOMAS MILLS, M. D.

Read, Jan. 2nd, 1817.

May 10th, 1815.

A LADY, 25 years old, of a scrofulous habit and sallow complexion, was, for several years, subject to bilious head-aches, vomiting and weaknesses; to palpitation of the heart, a sense of uneasiness or pain in both hypochondria and constipation of the bowels: during the last eighteen months, the catamenia have been deficient and irregular, and, for some time past, there has been a mucous or purulent discharge from the bladder and vagina.—Pulse 110, feeble; skin cool and dry; tongue foul and yellowish; urine of a milky colour; eye muddy; appetite bad; acidity, flatulence and a feeling of uneasiness in the stomach and bowels; emaciation; irregular hectic; pain on pressing the right

hypochondre or epigastrium.—This lady has been married three years and has no family.

Admoveantur hypochondrio dextro et epigastrio hirudines triginta.

Habeat pilulas catharticas, ad plenam alvi solutionem.

May 11*th*,

A large quantity of blood was taken away by the leeches; four dejections, pale and hardened; urine turbid; pain on pressing the right hypochondre and the epigastrium diminished—complains of pains between the shoulders and in the right scapula, and, occasionally, of chilliness, of a burning heat in the palms of the hands and soles of the feet: the discharge from the bladder and vagina continues, accompanied by dysuria and, at times, by pains throughout the loins and hips; thirst; appetite bad; rest disturbed.

Repetantur pilulæ catharticæ.
R: Infusi Rosæ uncias sex,
Sulphatis magnesiæ, drachmas quatuor,
Tinct: card: drach. tres m.
Sumantur cochlearia duo ter quotidiè,
Sæpe foveatur abdomen.

May 14*th*.

Two or three dejections daily, pale and dark; discharge from the bladder and vagina much the

same; heat and soreness, occasionally felt, in the epigastrium and right hypochondre; appetite and rest somewhat improved; pulse 106; complexion sallow; considerable langour and debility.

Admoveantur hypochondrio dextro et epigastrio hirudines quadraginta. Repetatur mistura ex sulphate magnesiæ.

May 18*th*—Pain in the epigastrium and right hypochondre abated; bowels open; fæces dark, pale, or greenish; discharge from the vagina and bladder diminished; less dysuria and pain in the loins and hips; tongue, foul and yellowish.

Habeat pilulas catharticas ex rheo et scammonio omni nocte—Repetatur mistura ex sulphate magnesiæ. Sumantur cochlearia duo, mane et meridie, quotidiè.

May 24*th*—Slight pain on pressing the right hypochondre; dejections, of a more natural appearance.

Admoveatur hypochondrio dextro, Emplastrum cantharidis. Repetantur pilulæ et mistura.

June 20*th*—No pain nor uneasiness in the epigastrium or right hypochondre; two or three dejections, daily; urine, natural; gradual recovery of appetite and strength; discharge from the

bladder and vagina, considerably abated; last week, there was a slight appearance of the catamenia.

Habeat, tincturæ muriatis ferri, guttas viginti bis quotidiè in aquæ tepidæ cyatho.

Habeat pil: cath: alvo postulante.

Country air, goat's whey, dandelion-juice and exercise on horse-back, recommended.

July 31st—A few days ago, there was a more natural appearance of the catamenia; no discharge from the bladder or vagina; complexion clear, and of a rosy hue; good rest, and appetite.

Repetantur omnia.

September 30th—Catamenia have appeared in a natural and regular manner; health and strength restored.

Omittantur medicamenta.

December 21st—For some day's past, symptoms of pregnancy have made their appearance; no catamenia for six weeks.

Habeat, magnesiæ ustæ, grana decem, bis quotidiè.

March 20th, 1816.—Pregnancy, announced.

Comment.

Bilious vomiting, head-aches, heat or pain in both the hypochondria, constipation of the bowels, and other symptoms, indicative of morbid actions in the liver and of imperfect digestion, first presented themselves; these were succeeded by amenorrhæa, a purulent discharge from the bladder and vagina, and finally, by marks of a broken constitution.

From the order and succession of the symptoms, it appears, that, at the onset of this attack, there was a vitiated secretion of bile, arising from disordered actions in the liver; imperfect digestion was the consequence, which, by its long continuance, so impaired the general health, as to cause amenorrhæa,—the vitiated state of habit thus produced, not unfrequently excites in organs, predisposed to disease, new and irregular actions, especially where the constitution is scrofulous; and hence, in the present instance, the purulent discharge from the bladder and vagina.

In the treatment of this patient, mercury was not employed, because the constitution was affected with scrofula, and though the liver was engaged, a cure was accomplished, without the aid of this remedy.

The application of leeches and a blister to the right hypochondre and epigastrium, abated and corrected the increased and irregular actions of the vessels of the liver; the daily-repeated exhibition of cathartics, removed large quantities of fecal and bilious matter from the alimentary canal, and contributed to produce a more healthy secretion from the abdominal viscera; these remedies, dandelion juice, goat's whey, exercise on horse-back, a chalybeate, and a fit regimen, improved the state of digestion, and gave tone and vigor to the general habit. With the restoration of the powers of digestion, there was a gradual restoration of health; the catamenia returned, the purulent discharge subsided, and soon after the health was re-established, this lady became pregnant, for the first time, though married some years.

A

REMARKABLE CASE

OF

HYDROCEPHALUS INTERNUS,

IN AN ADULT,

IN WHICH MUCH BENEFIT RESULTED FROM THE ADMINISTRATION OF DOVER'S POWDER.

BY

WILLIAM BROOKE, M.D.M.R.I.A.

PRESIDENT OF THE ASSOCIATION, &c.

Read Dec. 2nd, 1816.

From the wavering, and unsettled state of the pathology of the hydrocephalus internus, it is not surprising to find the medical world, still at issue respecting the best mode of treating it. The confession of Dr. Whytt, that he had never been so lucky as to cure one patient, who had those symptoms which certainly denote the disease, accompanying his very accurate, and masterly account of the malady, seems for many years, to have paralyzed every effort; and to have created a gloomy despair among physicians, from which,

they were at first completely roused, by the publication of some cases, successfully treated by Doctors Dobson and Percival, by mercurial unctions.

This newly proposed method of cure, coming from such high authority, excited, as might be naturally supposed, a very particular attention to the disease; and although from repeated trials, carefully made since that time, it has been incontrovertibly proved, that mercury is not even generally successful: yet much benefit has arisen from the enquiry, and much light reflected on the nature of the disease; many cures, certainly have been performed by mercury, particularly in conjunction with other remedies: so much so, that I believe few medical men now think themselves authorized to omit it altogether, though perhaps, the unctions are yielding fast to the more free exhibition of calomel as a purgative.

It is by no means my purpose to enter here upon a review of what has been said on the subject; but having observed the most marked good effects of opium in the case which I am about to relate, I was induced to examine as many authorities as I could procure to see how far the practice of giving opium was novel, or pursued by others; I can no where find any mention of Dover's powder in particular; but opium, salt of

hartshorn, musk, valerian and assafœtida, occasionally recommended with the intention of promoting sleep, and mitigating pain and spasm.

In the case of a young lady, 10 years old, treated by Dr. H. Quin, he gave a strong infusion of valerian, with tincture of valerian she was rendered quiet, and more inclined to sleep, but died.* Doctor Macbride relates the case of a little girl, who recovered by drinking largely of claret.†

In the 5th vol. of the Medi. Comment, Dr. Percival has published a case, in which he gave musk, valerian, and assafœtida, to allay violent convulsions, occurring towards the end of the disease, from the accidental protrusion of teeth, to which untimely circumstance he attributes the death of the child; as he contends the entire of the water had been absorbed by the action of the mercury previously given. In the same volume, at the end of a paper, in which Dr. S. Foart Simmons endeavours to shew, that in the successful cases treated by Drs. Dobson and Percival, more good effects were to be attributed to the blisters and cathartics than to the mercury. I

* See Dr. C. W. Quin, on Dropsy of the Brain, Appendix, Case XI.

† See his Introduction to the Theory and Pretice of Medicine, Vol. II. Chap. VI. 2nd, Edition.

find Doctor Dawson advising the cure to be confidently entrusted to blisters and opiates. (Theriaca andromachi.)

Doctor Fothergill recommends some drops of tincture of opium to be given in saline and absorbent mixtures, to check the vomiting. In a very valuable paper of Dr. Percival's, published in 1791, we find the Doctor renouncing his exclusive trust in the internal and external use of mercury, and acknowledging the necessity of other medical aids to mitigate pain and spasm, promote absorption and encrease the serous discharges of the body, "With these views, says he, I now generally prescribe either opium, musk, salt of hartshorn, flowers of zinc, squills, or blisters, in conjunction with the mercurial course, with which they perfectly coincide"—the Doctor further remarks, "when the pains are very acute, opiates in large and repeated doses are essential to the cure," yet in the very next page, in the case of a young lady, 12 years of age, to whom he gave two pills, composed of a grain each of digitalis, opium, and calomel, he refuses to the opium its due share of merit in the recovery: "after the second dose of these pills, the patient fell into a sound sleep, which continued for six or eight hours; she awakened in a great measure free from pain, highly refreshed, and capable of viewing the light: her head had sweated profusely, a

large flow of urine had taken place, and from this period the commencement of recovery was clearly to be dated. But I am inclined to ascribe the salutary change rather to the opium than to the fox-glove, and to the opium only as auxiliary to the powerful action of the mercury, which had been previously and largely administered in the way of unction."* In the Medical and Physical Journal for, I believe, the year 1800, Mr. Shaw has given a case of a child six years old, successfully treated by opium, mercury, and blisters; Mr. Reeve another, and Mr. White of Bath, mentions his giving opium to procure sleep. Dr. Garnett has published in detail,† the last case which I shall quote.

The lady was in her sixteenth year, and recovered from a very decided and severe attack of the disease; she was bled, blistered, and otherwise evacuated, took calomel, digitalis, and an opiate draught, or pill every night.

The circumstance of coma and costiveness so frequently accompanying water on the brain, has I believe, intimidated many practitioners from the trial of opium, which otherwise, from the severity of the pain and spasms, would appear so strongly indicated. Dr. Percival himself forbids

* See Medical Facts and Observations for 1791.

† Medical and Physical Journal for 1801, No. xxiv.

it, when coma occurs:* but perhaps the caution may not be deemed so necessary, when we consider the bold and successful manner in which opium was given by Bromfield in concussions of the brain, without any regard to the costive state of the patient; and it will be seen in the case which I now hasten to give, that the bowels were not rendered more difficult to be operated on by cathartics than they had been before its administration.

Mr. R. Lutton, aged 20 years, about May, 1801 came to the house of the Messrs. Thwaites, apothecaries, Marlborough Street, to improve himself in his profession. He was of a delicate, yet not unhealthy constitution, rather pale-faced, with dark prominent eyes, a little short sighted, and had black hair, a long neck, head rather stooped, tho' by no means disproportioned in size; he was observed to be remarkably careful of himself, even from his boyish days, and anxiously to avoid any occasion of catching cold; he was somehow persuaded that he would die of *water on the brain*, and was much confirmed in this opinion of late years from perceiving upon the slightest degree of indisposition, the oddest sensations about his head and eyes, which he could not describe, and, also from the disease being in his family, having lost by it four brothers, at different periods of infancy and childhood, and a sister at the age of 27.

* Medical Facts and Observ. 1791.

About the middle of August 1801, this gentleman was seized with an erysipelas in the leg, which went off in a few days, without any thing remarkable, except my observing, that he required an unusual dose of any purgative to produce an effect. He had complained of great langour, with dull pain across his forehead for many days before the inflammation appeared, and found himself constantly chilly, although the thermometer stood at that time at 71. On the 10th September I was again requested to see him; I learned that he had never been entirely free from the head-ache since the erysipelas, but that on the two immediately preceding days, he had been regularly attacked about 3 o'clock P.M. with nausea, vomiting, and rigor, followed by a hot fit, and accompanied with very acute pain quite across the forehead, but particularly severe in his temples, and continuing without any alleviation until 3 the next morning, when he slept, and arising at the usual hour, tolerably well, was able to attend to his business during the forenoon. Eyes were suffused, and during the pain, very impatient of light; countenance pale, pulse about 90; skin hot and dry; tongue white; thirsty; bowels had been opened the day before, and, as usual, with some difficulty.

Supposing from the regular accession of pyrexia and suffusion of the eyes, a preternatural fullness about the brain or its meninges, I

advised him to try some antimonial powder; the first dose produced much sickness, and several hours of general and free perspiration, which seemed rather to aggravate than relieve the pain, so that he would not repeat it. He was able to go about the next morning, and happening to meet Doctor Perceval, mentioned to him his situation, and was recommended by the Doctor to apply leeches to his temples.

12*th*.—Two leeches were put to each temple last night, they bled freely, but pain seemed rather increased; no sleep or usual relief towards morning; eyes to day much suffused, pupils contract, very impatient of light and noise; nausea and vomiting pulse nearly natural; skin hot, but softer since the antimonial powder. A large blister was put this evening on his head.

13*th*.—Blister rose and discharged well; no alleviation of pain, which is now constant and very severe, but evidently worse in the evening; no sleep; vomits his whey; bowels confined: 30 grs. of the extractum colocynthidis compositum, with six of calomel, were made up into six pills, and two ordered 2dis horis.

14*th*.—At 10 o'clock last night, had taken the six pills without any effect; no vomiting; soon after that, the pain becomnig very violent, attended

with frequent ravings, he was ordered half a drachm of jalap, two scruples of vitriolated tartar, 10 grs. of scammony, and 4 of calomel, in two boluses; he took both at the interval of two hours, and about 4 o'clock in the morning, had four very free stools, and fully an hour's complete freedom from pain; his hopes of permanent relief were however, soon checked, for at six the pain returned with increased violence.

Finding myself baffled in every attempt I had made to relieve him, and aware of the fatality of the disease, I begged for assistance, and Doctor Perceval was requested to meet me the next day. In my evening visit, however, at 9 o'clock, I found him in a state as truly melancholy and deplorable as can be well conceived, labouring under the extremity of pain, fully impressed with the nature of his complaint, without a hope of recovery, or even of mitigation of his sufferings. A case of severe pain in the head, in which I had lately given opium with success, luckily at the moment, occurred to my recollection, and conceiving that the present exigency warranted any attempt, I ordered him a draught composed of 40 drops of vitriolic aether, and 10 of the tincture of opium in some mint-water; I saw him again in two hours, and finding the pain not worse, and that he was a little inclined to low delirium, without any alteration having taken place in the pulse, I repeated the

draught. He had himself applied aether and laudanum to his temples, twice during the day, without receiving any benefit.

15*th*.—Fully an hour's quiet sleep from the second draught: remainder of the night rather easier; to-day pain and all other symptoms as before — Doctor Perceval met me at one o'clock. He was then suffering much; pupils natural; no strabismus. Pulse between 80 and 90; tongue white; skin warm; nausea; urine natural. From the manifest appearance which evacuations had of aggravating the pain, Doctor Perceval found himself by no means inclined to recommend a recurrence to that plan; the relief which was obtained last night, tho' short, was decided, and fairly to be attributed to the æther and opium; this being considered, together with the case which had occurred to me, the Doctor thought we could not do better than to give the opium a fair trial. Our confidence in it was happily much strengthened, by Doctor Perceval's adducing, with his usual sagacity, the authority of Bromfield, who proposed, with such excellent effect, *sudorific opiates* in concussions of the brain.* We, therefore, ordered 15 grs. of Dover's powder, (Phar. Lond.) to be given every third hour, and desired his head might be dressed with savin ointment, to keep up a discharge.

* See Chirurgical Observations and Cases, by Wm. Bromfield, 1st. Vol.

16*th*.—Began the Dover's powder, at three yesterday, and had a second dose at five, and at five this morning, took the sixth, (nine grains of opium in fourteen hours.) The second procured two hours easy sleep, and he had some more during the night, which was much quieter than usual, no sickness or perspiration, though he drank freely. Pulse about 90, eyes as before, bowels confined. About six o'clock this morning, he took a powder composed of jalap, scammony and calomel. Between eight and nine, he took a second powder, and soon after vomited nearly two quarts of a clear green watery fluid, without much nausea, but with evident relief to his head, which he said, "he al-"ways found free from pain, while in the act of "vomiting or reaching," soon after, a profuse sweat broke out, but did not appear to carry with it any relief; during the day he took two more of the purging powders, but would take no more, or any thing else in that way, as he attributed the returned severity of his pain, which was evident since he had left off the Dover's powder, to them; and in the evening, no motion being procured, I ordered a sharp saline glyster, and on it operating, that he should return to the Dover's powders as before.

17*th*.—Enema gave one free motion, at 8 P. M. yesterday began his Dover's powder, and at 12 to-day finished his sixth dose, had several hours

sleep, and felt much less pain for the last twenty-four hours, had some vomiting in the morning succeeded by sweat. Doctor Perceval saw him again to-day, and finding the evident good effects of the opium, we continued it every fourth hour only. Pupils rather contracted.* Eyes suffused, pained by light; pulse quiet; still feels dull pain across his forehead, but not acute, unless upon motion or sudden admission of light, bowels open, by injection; discharge from head very small.

18*th*.—A very quiet night: pain only at times, and not severe: free perspiration: had two natural stools in the forenoon,† and found himself wonderfully better and stronger, but about four o'clock the pain became worse, and continued so for the evening: took the Dover's powder every fourth hour.

19*th*.—Pains became easy about 12 last night, and continued so: free perspiration: drank whey and wine and water, took the Dover's powder re-

* Doctor P. asked, if from this circumstance we could suppose, that opium, which is known to contract the pupils, may induce a state of the brain directly opposite to that produced by the effusion of water into the ventricles?

† Under the influence of evident effusion into the ventricles of the brain, and the liberal administration of opium, the natural evacuations of the intestinal canal this day exhibit, I believe rather a singular phenomenon in medicine.

gularly until nine this morning, when he was suddenly seized with low delirium, and refused to take any thing during the day but whey. Pulse weak and rather slower, with tendency to subsultus tendinum; eyes as usual.

20*th*.—A bad night, with frequent moaning, and has continued all the morning in a state of stupor; unable to speak or move: took one powder last night: no perspiration: a natural stoop; pupils rather more open to-day, but contract readily on the application of the stimulus of light; pulse under 80. We determined on a trial of mercury, and ordered a drachm of the strong ointment to be rubbed in every eighth hour, and also 20 grs. of the Dover's powder 4tis horis, if he can be got to take it. Just after our visit, he became perfectly delirious, and remained so all the evening, requiring at times, slight coercion, and refusing to take any thing: during the fit, his eyes rolled much, but pupils were natural; he seemed to possess much of the cunning of the maniac, in some attempts he made to get possession of his knife, and appeared highly offended at its being refused to him, and at not being allowed to go out.

21*st*.—Continued all night as yesterday, at five this morning, passed a quantity of water, the first for many hours, fell into a sound sleep, and has continued calm all day; took but one dose of Dover's powder; four times rubbed.

22*nd*.—A very quiet night, rational the entire day, complaining of his head at times, often enquired the hour, and praised much some broth which they gave him; bowels confined; two powders and two rubbings.

23*rd*.—Would not allow the injection last night, pretty much as yesterday; pulse firm; two powders; two rubbings; no motion.

24*th*.—Night as two last, about four to-day became suddenly delirious; eyes rolled much and wildly; pulse feeble with tremour of his hands, and twitchings of the muscles of the face; no strabismus; skin warm; no perspiration; belly full and hard. Doctor Perceval not being able to meet me to-day, as he intended, I conceived it necessary to have the bowels opened, and as he had obstinately refused to admit of the injection, or to take any thing by the mouth, I endeavoured to deceive him by ordering half an ounce of the tincture of jalap to be given in the drink, and to be repeated occasionally. By ten P. M. he had taken the physic thrice without effect; he was then quiet and inclined to sleep; mercurial ointment twice to-day; no Dover's powder.

25*th*.—Another ounce of the tincture was given in the night, no stool; no sleep; low delirium; much langour and stupidity; this morning pulse feeble,

subsultus; pupils more open than I had ever seen them. At two to-day became highly delirious, tore his shirt, and sat nearly an hour quite naked on the foot of the bed with much angry expostulations at not being allowed to go out; at four he made a quantity of water, instantly calmed, and went to bed; I then prescribed another half ounce of the tincture of jalap, with 30 grs. of electuary of scammony added to it; he immediately perceived the latter medicine, but took it: at nine he took a similar draught; he was then feeble and quiet; pupils dilated, but contracted to the candle. Pulse 90 and small, belly swelled; will not hear of the injection,—two rubbings to-day.

26*th*.—No motion; a restless and delirious night; at nine this morning, was rational, and allowed the enema to be thrown up, which brought away two copious stools, and much urine; eyes as yesterday; twice rubbed to day; no ptyalism. The bowels being now opened, and observing that his nights had been bad, and the pupils beginning to dilate since he had left off the opium, I repeated it, adding to each dose 2 grs. of calomel.

27*th*.—A bad night, pupils this morning dilated, though he had taken the powder three times since twelve yesterday; no perspiration; did not know me; seemed very uneasy, picking much at the bedcloaths; had passed no urine from eleven yester-

day, until twelve to-day, after which, he immediately got rational and quiet, falling into a sound sleep, previously having drank a pint of wine whey at a draught; in the evening was easy; pupils natural: did not complain of his head, except on moving; pulse feeble and 100; two rubbings and three more powders.

28*th.*—A restless night until three o'clock, when passing a quantity of water,* he became calm and slept soundly for many hours. Doctor Perceval saw him to-day, and thought him more rational, giving a clear account of his feelings, and appearing less under the influence of disease than he had ever been during his indisposition; eyes suffused, but pupils not dilated; pulse 120; eat several sweet biscuits to-day with an appetite; two powders; two rubbings.

29*th.*—Night quiet. His mother arrived from the country about 7 o'clock in the morning, and found him in a sound sleep; in her impatience she awoke him; he knew her perfectly, seemed greatly affected at her tenderness, and expired about ten minutes after without the smallest struggle.

* I remarked throughout the whole of his illness, that he was always relieved from his delirium by a discharge of urine. The nurse was so well aware of the circumstance, that she immediately went to bed on seeing him make water, knowing that he would be quiet for some hours.

It was with much difficulty that I could obtain permission to have the head opened; a late hour in the evening was mentioned, at which it must be done, or not at all. On our going into the room, the nurse-tender told us, we need not have the head opened, as the water was all running from the nose: upon examination, we found, that about an ounce had come away, apparently drop by drop, from one of the nostrils; we, however, proceeded to the operation, and as the surgeon was passing the saw through the parietal bone, before he had got half through it, water gushed out from both nostrils in a full stream, to the amount of about eight ounces, as well as we could judge. The vessels of the dura mater were very turgid, and both lateral ventricles contained a quantity of the same aqueous fluid, as had flowed from the nose. It was very unfortunate, being limited as we were in time, that we were unable to pursue the dissection any further. A patient examination might have detected a preternatural passage to the nose. Am I not right in supposing the water must have passed through the cribriform plate of the ethmoid bone? and if so, might not a strong errhine, exhibited a day or two before he died, have produced the discharge and lengthened life? Are we not also to suppose, that some of the water must have got into the third ventricle, and down towards the base of the brain by the iter ad infundibulum, and, also, into the fourth, by the aqueduct of Sylvius?

and if so, might not issues put immediately over the additamenta of the temporal or petrose sutures prove eminently serviceable, particularly in children? (see Bromfield's Chir. Obser.)

In the above statement, I have aimed at nothing but a concise and faithful narrative of symptoms and practice; and it may be observed, that if we have been denied the satisfaction of performing a cure, we have had, at least, the consolation to think, that by the opiate the poignancy of the pain was blunted, and the whole course of the disease rendered comparatively mild. If we are to admit with Drs. Quin, Rush, Beddoes and Garnett, the inflammatory nature of the disease at its commencement, may we, from the analogy of acute rheumatism, account for the benefit derived in this case from the Dover's powder?

From the 15th to the 28th inclusive, he took 53 grains of opium, as contained in the Dover's powder, two days of which, the 24th and 25th, he had none; two ounces, and two drachms of the strong mercurial ointment were well rubbed in, and 34 grains of calomel given internally without producing any apparent effect.

Is it not truly singular, that so copious an effusion, an effusion which the natural cavities of the brain seemed incapable of containing, and

which had commenced to open for itself a passage out of the head, and which it appeared to have perfected immediately on the collapse of the parts succeeding death, should yet so little disturb the usual functions of that truly wonderful and delicate organ? He saw, heard, tasted and felt with the usual accuracy to the last moment, nor was one of the sphincters even relaxed; we neglected to inquire about his smell.

This Gentleman's father, a few years before his marriage, received a very violent blow across the upper part of his nose, by which he lost a quantity of blood; soon after, a cataract appeared on one of his eyes, which his surgeon attributed to the hemorrhage; he was couched and recovered, the other eye is now blind from the same cause; in other respects the parents are both healthy, nor did they ever hear of water on the brain until it occurred among their own children.

The Case and observations which I have just now had the honor to recite to the Association, were drawn up in October 1801, and read at a meeting of the Royal Irish Academy on the 26th of the same month. The practice, however, of exhibiting opium in hydrocephalus, not being new, and its failure in this case, as to any ultimate benefit, induced me, in concurrence with the opinion of my medical friends belonging to the

academy, not to publish the case in the transactions of that learned body, but rather to wait for some further experience. Since then, the paper has lain in my drawer, but I have continued cautiously to exhibit the Dover's powder, and with unvaried success as to alleviation of pain and distress, and without being able to observe that any bad consequence resulted from the practice.* I am not prepared to say precisely in which stage of the disease we are to give this opiate; much less, to recommend that we should defer for one hour, in its favor, having recourse to these active and decided measures, which experience has now so frequently proved to be beneficial, and which our improving knowledge of the pathology of the disease, so strongly encourages us to persevere in.

When pain or spasm is to be alleviated, or sleep procured, Dover's powder will answer the purpose, and need by no means interfere with the other more general curative indications, nor will it retard or lessen their effects. I have long entertained the opinion which Dr. Cheyne has published in

* Even at that day, when Physicians were not so fully sensible of the necessity of unloading the vessels of the head during the first stage of the disease as they are at present; I was not satisfied that sufficient depletion had been practised. The patient was very opinionated, and obstinately opposed all evacuating remedies, under the idea that they would weaken him and increase his pain.

his second essay, " that while opium relieves distress, its tendency is to promote the efficacy of the other remedies."

You are fully aware, Gentlemen, that a learned member of this association, has given to the world two very valuable and ingenious essays on hydrocephalus acutus. In the first, published in Edinburgh, A. D. 180[illegible], Doctor Cheyne says, (page 107,) " to allay the pain of hydrocephalus, when not attended with stupor, opium has been recommended: with this design I have never prescribed it." In the second essay, however, published here in 1815, the Doctor very candidly tells us, that he was led by accident to what appears a considerable practical improvement: to a child of about 7 years old, near the end of the second stage, and suffering much pain, he gave five grains of Dover's powder with as much hydrargyrum cum creta. In an hour or two the child's pulse was improved, he enjoyed respite from pain, and the stools became fœculent. The patient appeared in a tranquil sleep for the next 10 or 12 hours, after which period the same medicine was repeated. He passed through the third stage without suffering, by keeping him under the influence of opium, and his life seemed prolonged rather than shortened by it.* The Doctor afterwards

* Page 33.

gives a series of cases, in which after depletion, and in combination with mercurials and antimonials, the compound powder of ipecacuanha appears to have produced considerable advantage. So very ample a testimony from an author of such acute observation, and from one who has paid such particular attention to the disease, cannot fail of making a due impression in favour of the Dover's powder, and encouraging its use in this painful and untractable malady.

ON

THE USE OF OXIGEN GAS, IN ANGINA PECTORIS,

BY

ROBERT REID, M. D.

LICENTIATE OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, MEMBER OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH, ONE OF THE PHYSICIANS TO ST. THOMAS AND ST. MARY'S DISPENSARY, &c. &c.

Read, July 7, 1817.

The following is the case of a gentleman, aged 66, of a low stature, corpulent habit, and short neck. In his youth he lived very freely; but took a good deal of exercise, and was particularly fond of shooting.

For several years he complained that he was frequently liable to be suddenly attacked with violent pain across the chest, extending from thence down the arms, sometimes even as far as the fingers, attended with very considerable anx-

iety. This kind of paroxysm came on when he would commence walking soon after eating; but upon resting quiet for a few minutes, it gradually subsided, and he could continue walking for the whole day afterwards without the slightest inconvenience.

About two years ago he was attacked with slight apoplexy, attended with evident relaxation of the muscles on one side of his face. The disease, however, was cured at that time, by active remedies, and the establishment of issues in both arms, which were continued during the remainder of his life.

On the first of June, about five o'clock in the morning, he was attacked with great difficulty of breathing, attended with sense of suffocation, which threatened immediate dissolution. He had some friends to dine with him the day before, when he ate very heartily, as was his usual custom, and went to bed in good spirits, where he slept remarkably easy till the time of the attack. Mr. Macklin was sent for, who, on arriving, found it necessary instantly to bleed him to the extent of twelve or fourteen ounces, from which he derived considerable relief, and the paroxysm gradually subsided. At two o'clock in the afternoon of the same day, Mr. Macklin and I visited him; we found his pulse intermitting; he complained of no pain

in any part; but seemed to have considerable alarm expressed in his countenance: having taken some medicine which was ordered in the morning, he had passed some dark coloured fæces. There was, however, still considerable fullness in the abdomen. He was not subject to palpitation of the heart; he could walk up stairs without any difficulty of breathing; he had not any œdematous appearance in his hands or legs, and always slept very easy.

He was ordered this day a few grains of the blue pill and cathartic extract, to be swallowed with a mixture of sulphat of magnesia and infusion of senna; and also draughts of sulphuric æther, and syrup of squills to be taken every hour.—Low diet.

2nd.—Passed a quiet night; pulse not now intermitting, but rather quick; tongue dark at the root; abdomen still full; had passed much dark coloured fæces since yesterday.

3rd.—General appearance and spirits much better; pulse very slow and full; passed much fluid fæces since last visit; urine natural in colour.

4th.—About seven o'clock this morning, a violent paroxysm came on, which rendered it necessary immediately to bleed him to the extent of

twelve ounces; the blood appeared very thick, and on cooling did not afford near the usual quantity of serum. His pulse again became intermitting, and he had considerable anxiety of countenance, which now exhibited a bluish tinge. He said he slept remarkably easy during the night; but that on awaking he perceived something like thick phlegm obstructing his breathing, and which he was not able to expectorate. This difficulty gradually increased, attended with a rattling noise, until he was bled, which instantly relieved him. When the paroxysm was at its height, his extremities became cold; his pulse not perceptible at the wrist, and these symptoms were soon followed by profuse cold perspiration all over the surface of his body. He now complained of frequent catchings in his breathing, like deep sighs, and expectorated much of a thin dark coloured matter. Doctor Harvey was now requested to see him, and it was agreed that he should continue the purgative medicines, and take an expectorating mixture of gum ammoniac and squills during the day. And it was advised that the operation of the lancet should be reserved as a last resource, since it was already so frequently necessary to have recourse to it: and that every means should be first tried to dispel the paroxysm by volatile stimulants, as the spirit of hartshorn, æther draughts, &c.

11*th*.—Since the last attack he seemed gradu-

ally getting better, until yesterday evening, when his pulse was observed to be remarkably slow, and he passed a small quantity of dark coloured fæces of the consistence and appearance of melted pitch; his spirits were good, but he said that in the course of the day, he observed two or three sighs or catchings in his breathing: indeed, one occurred while I was feeling his pulse, and it appeared as if the heart ceased to act, for the pulse stopped during the time of one beat.

On awaking about six o'clock this morning, he observed a slight paroxysm, which seemed to be induced by the operation of a purgative which was then taking effect: it went off, however, without any remedy, as soon as he passed a quantity of liquid fæces.

On the 14th he had a similar paroxysm, more severe, and on the 17th a slighter one.

18*th*—He has passed a quiet night, and says he feels better; his countenance, however, still shows anxiety, and that bluish tinge, before mentioned: he passed a good deal of high coloured urine during the night, which has deposited a quantity of reddish sediment.

Since the 4th instant, he has occasionally taken pills, consisting of assafœtida, James's powders, and squills, and a purgative every night, with, for

the most part, a vegetable diet; it having happened that any day he took a small quantity of animal food, he had a paroxysm next morning: he was now ordered to abstain from it altogether.

July 2nd—About 8 o'clock this morning, having slept as usual easy, on awaking, he found his breathing as if obstructed by phlegm which he was unable to expectorate. This proved, however, to be only the customary forerunner of a paroxysm, which now came on with apparently redoubled force after his having been for fourteen days free from any attack.

During this interval, although he said he felt better, and even took an airing in the carriage two or three times; yet he appeared very much reduced, particularly in his limbs, and a kind of collapse with a dusky hue was very conspicuous in his countenance. On this account he had been allowed for several days back, a little fish for dinner.

His pulse since last attack, was gradually getting fuller and more regular; indeed it appeared perfectly so for four or five days. But on the 29th of June, there appeared a kind of secondary stroke in his pulse, which occurred at intermediate intervals, from four beats, to twenty. The next day, his pulse was much slower than natural,

and yesterday, still more so. In the evening, he passed a small quantity of dark coloured pitchy fæces, but seemed rather in better spirits than usual.

As it had been resolved to defer blood-letting till the last resource, it was now determined to try the effects of stimulants; he was therefore ordered some æther draughts, and a small quantity of whey with spirit of hartshorn, to be repeated frequently, until the paroxysm subsided.

On visiting him again, about three o'clock in the afternoon, we found he had taken two of the æther draughts, and about two ounces of spirit of hartshorn in a proportional quantity of whey; the paroxysm seemed, however, to have continued increasing, ever since I saw him in the morning. He was now hardly able to articulate; his breathing was extremely difficult, attended with a rattling noise, as if his chest were filled with phlegm, and he was gasping for want of air. His face and lips had a dusky bluish tinge, his extremeties were cold as marble, and there was profuse cold perspiration over all the surface of his body. His pulse was not perceptible at the wrist, and he had no evacuation from his bowels since yesterday evening.

In this situation, it seemed there was not a mo-

ment to be lost; we therefore agreed to take a small quantity of blood from his arm. This gave instant relief, scarcely three ounces were taken, when his pulse arose, the difficulty of breathing subsided, and a gentle warmth spread over his limbs.

He now passed a quantity of wind from his stomach, and expectorated some dark coloured thick phlegm. Seeming much fatigued from the length of the paroxysm, (which had continued from seven in the morning, till four in the afternoon:) he was ordered to take a purgative draught, and after a few hours sleep, to have an enema administered.

July 3rd—The enema and purgative taken yesterday, had no effect, he was therefore given a draught with castor oil about eleven o'clock, which in about two hours produced a copious evacuation. Pulse, now as usual after a paroxysm, very irregular and quick. He seems very much exhausted with considerable anxiety in his countenance.

From the circumstances antecedent, and during the paroxysm, I was now led to propose to Doctor Harvey and Mr. Macklin, that our patient should inhale a quantity of oxigen gas immediately on the threatening or approach of the attack.

This was agreed to, and it was proposed that I should sleep in the house, to be ready to apply it when necessary, and to which I consented. It was also agreed, that he should continue the purgative every night.

On the 5th of July in the evening, I observed the usual slow, full, and soft pulse, that preceded the attack, and having the apparatus prepared, I made him inhale a quart of the gas, several times, until it was brought nearly to the state of atmospheric air.* On making two or three imperations, his pulse changed from being slow, soft, and full, to be rather quick, and gave to the finger a good deal of that feel like wire which is sometimes perceived in it. I then gave him the purgative draught, and left him for the night.

July 6th—About five o'clock in the morning, I was called up, and I found him affected with all the appearance of an approaching violent attack; I immediately gave him the same quantity of oxygen to breathe as on the first application of this remedy, which was soon followed by similar effects. I then gave him a little spirit of hartshorn in whey. The paroxysm afterwards subsided entirely, and he had a copious evacuation from his bowels.

* I mean with respect to its Oxigen.

In the course of ten days after this, he had several attacks, which were treated in a similar way, and successively became slighter, until they ceased altogether.

I continued, however, to give the oxygen gas, at bed time, for eighteen or twenty days, gradually lessening the quantity, until it was reduced to nearly an atmospheric state. During this time, his general appearance was wonderfully improved, and his complexion became clear as in perfect health; he took daily exercise in a carriage, or on a jaunting car, and could walk some distance without the slightest inconvenience, or return of the pains he formerly felt, on first commencing to walk.

From the time he took exercise out of doors, he was allowed some fish for dinner, which seemed to agree with him very well, and he took his usual purgative every night.

September 12th—For a few days back, his spirits appeared very low and dejected, and this morning about 8 o'clock, a violent paroxysm of the usual kind came on. Spirit of hartshorn, æther draughts, and other stimulants were given, without any apparent advantage, and not having any oxygen gas prepared, recourse was obliged to be had to the lancet. The blood was remarkably

dark coloured, indeed almost black, very thick, so as almost to coagulate before it flowed out of the vessel; hardly two ounces could by any means be obtained. This was sufficient, however, to afford relief to the paroxysm.

His spirits were now completely depressed, and although every means were tried to rouse and amuse him, his strength and memory gradually failed. On the 16th I was again enabled to give him the oxigen; but the despair that took possession of him, overcame every obstacle, and on the 18th, about two o'clock in the morning, on awaking out of his sleep, he had an attack, which in a few minutes put a period to his existence.

Observations.

In this case, there are some circumstances which seem to deserve attention.—

We observe that this patient was for several years subject to severe pain across his chest, and arms on commencing to walk after eating, unattended, however, with any difficulty of breathing; but that from the first of June, when the first attack of difficult breathing came on, he never afterwards complained of any pain. Hence it would appear there were two distinct stages in this disease. We may thus reconcile some differences amongst authors who have reported cases of this kind; and in which the fatal termination

occurred in the primary stage, or that of the difficulty of breathing.

We are next to take notice of the symptoms, which regularly preceded an attack, by which we may be enabled the more effectually to guard against the paroxysm.

And lastly, we find that the oxigen gas may be capable of superceding the operation of the lancet; which, of itself, must bring on a fatal disease.

I would wish it, however, to be distinctly understood, that I do not recommend the oxigen gas, as a cure for affections of this nature: but only as a palliative, by which time may be gained for the application of more appropriate remedies. As this is the first case of the kind I have ever yet witnessed, I must defer any farther observations for the present.

ON THE

NATURE AND TREATMENT

OF

TETANUS,

BY

ROBERT REID, M. D.

LICENTIATE OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, MEMBER OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH, ONE OF THE PHYSICIANS TO ST. THOMAS AND ST. MARY'S DISPENSARY, &c. &c.

Read, Feb. 28th, 1817.

From the great want of success in the hitherto adopted modes of treating Tetanus, it is evident the pathology of the disease has not as yet been clearly understood. Having been witness myself to several cases which terminated fatally, notwithstanding the variety and activity of the measures adopted for their relief, I determined to devote a good deal of attention to the subject. As it would be unnecessary here to enter into a minute detail of cases which, when compared together, would afford little or no variety from the course of symptoms usually related by writers on the disease, I shall only state the result of my observations.

It matters little, from what exciting cause Tetanus may take its origin, for when once formed, whether on account of wounds, or idiopathecally the same course of symptoms follow.

The disease sometimes comes on suddenly to a violent degree, but more generally its approach is indicated by a sense of stiffness in the back part of the neck, which gradually increases, till by degrees all the muscles of the head become affected with spastic rigidity. And owing to the great difference of strength between the muscles which close the jaw, and those which serve to depress it, the teeth are set so closely together that they do not admit of the smallest opening. The utmost violence of spasm is not constant; but after a few minutes subsides a little, not however, affording such relaxation in the muscles as would allow the action of their antagonists.

This affection of the muscles of the head is soon transmitted by succession to all the muscular parts of the body. But it is worthy of remark, that there are some muscular parts which resist the effects of the disease for a considerable time, and fall into the general destruction only towards the fatal period.

These muscles may be divided into two classes, the one comprehends all the muscular parts of the

thoracic and abdominal viscera, and the other, all those which belong to the organs of any of the five senses.

Thus it is observed, that the natural functions are little affected, vomiting sometimes occurs but generally does not continue. It is usual enough for the appetite of hunger to remain through the whole course of the disease, and what food happens to be taken down seems to be regularly digested; the urine is regularly secreted, although sometimes restrained, and is voided with difficulty and pain. When the spasms are violent, the pulse is contracted, hurried and irregular; but the respiration is affected in like manner, and during the remission the pulse and respiration usually return to their natural state.

With respect to the second class, we observe that the tongue retains its mobility for a considerable time; the arms also, do not become affected till long after the lower extremities; and even when the muscles belonging to them are affected with spasms, these alone escape which move the fingers, and these often retain their mobility to the last. The head also in this disease is seldom affected with delirium, or even confusion of thought, till the last stage of it, when by the repeated shocks of a violent distemper, every function of the system is greatly disordered.

By reflecting on these phenomena of the disease, we are led to observe, that the thoracic and abdominal viscera are not primarily affected; and that the disease cannot take its rise in the nervous substance supplying these organs, for were it so, these viscera must immediately take on diseased action. Hence it must be concluded, that the ganglionic system is not the seat of the disease. The same argument is applicable to the cerebral system, comprehending the intellectual powers, and the five senses. There are circumstances which even shew that these systems have rather a tendency to oppose this disease than to participate in its effects: thus we observe, that the tongue, which is the principle organ of taste, retains its powers of free motion, until the cerebral system becomes affected. Now we know that the gustatory nerve is a branch of the fifth pair which properly belong to the cerebral system, while the ninth pair are acknowledged to be those which supply the muscular parts of that organ, and are found to arise from the inferior part of the corpora pyramidalia to go out of the skull by their proper holes in the occipital bone. We also observe that the principal organs of touch are the hands, which are placed in the upper extremities. The nerves of touch should then in this situation oppose the effects of the disease, which we find to be the case, as I observed before, that the upper extremities remained a long time exempt from spasm,

and that the fingers often continued so to the end.

Having thus explained how these two systems do not appear to be the seat of the disease, we must naturally conclude, that it rests altogether in the other system, or that of the spinal canal: every circumstance of the disease conspires to substantiate this idea. We observe, that the only parts of the body which are engaged in the disease from the commencement, are those constituted of muscles; but upon dissection, there is not the slightest injury to be discovered in the structure. Now we know, that the nerves which are distributed to those parts, and are the proper stimulants to muscular action, in the living body, all take their origin from the nervous system of the spine. It is natural, therefore, to conclude, that as we cannot discover, in examination after death, any morbid change in the parts which are acted on by the disease, we should expect to meet with some change in the parts, which afford the stimulus to muscular action: hence the disease must be seated in the nervous system of the spine.

When we come to examine the bodies of those in whom the disease has proved fatal, we can no longer have any doubt that this is the fact. The generality of writers on this disease seem to think that no morbid appearances can be detected in

dissecting subjects who have been cut off by Tetanus.* Indeed, Mr. Larey mentions a case, where there was a contracted state of the pharynx and œsophagus, attended with a red, inflamed appearance of the internal membrane, which was covered with a viscid reddish mucus; without mentioning any morbid state of the brain, or the viscera of the abdomen or thorax.

Led, however, by the foregoing arguments, I have examined the spinal system in a few cases of this disease. In the first two patients, the disease did not prove fatal until the fourth day: no morbid appearance could be discovered in the viscera, nor in the brain, except an increased vascularity, particularly in the membranes, but a considerable quantity of water flowed from the spinal canal, after the brain had been removed.

On the 25th of February, having occasion to visit about three miles from town, I was requested to see a boy, aged about fourteen, who, the night before had received a severe burn in the toes of the right foot. I was informed he was a beggar, who went about the country exposed to the vicissitudes of the weather, during an inclement

* Some, indeed, mention appearances which were evidently the effects of the disease.

season, and that the evening before, he went to rest in a lime kiln, where he was found the next morning, in the state in which I saw him. Having no friends or habitation, I directed that he should be sent to the Richmond Surgical Hospital, where he remained under treatment for four or five days, when Tetanus came on, and he died in thirty-six hours from the first attack. I did not, however, see him again until he was dead.

On dissection, the viscera of the abdomen and thorax, appeared perfectly natural, and there was no morbid appearance in any of the muscular parts. The brain appeared healthy in every respect, except some increased vascularity in the investing membranes. Upon opening, however, the cavity of the spine from the back part, there appeared to be a fatty substance deposited in the cellular tissue, investing the dura mater, for the extent of several of the dorsal vertebræ.* On raising the nervous mass, (with its dura mater

* This, however, was natural to the part, and was noticed on account of its being absent at both places immediately over where the effusion was afterwards discovered on raising the nervous mass from the bodies of the vertebræ. Since this case occurred, I have examined several, and in very few of them was much morbid appearance observed until the mass was raised from the bodies of the vertebræ; and this would account for some persons denying those appearances who only view the spinal mass in its situation from the back part.

entire) from the spine, there appeared a considerable effusion of blood into the cellular tissue, connecting it to the upper lumbar and lower dorsal vertebræ. A similar effusion occurred also along the bodies of the upper dorsal and two inferior cervical vertebræ. On slitting up the dura mater on the anterior surface, or that next the bodies of the vertebræ, the nervous mass appeared highly vascular, and the vessels of every description remarkably tortuous.

In the part which was situated opposite the ninth and tenth dorsal vertebræ, there appeared a whitish substance very nearly resembling the medullary matter, effused between the arachnoid coat and pia mater, occupying the space of about an inch and half, and covering about half the circumference of the nervous mass. On breaking the membrane inclosing it, I could wipe it off, and there could not be the slightest rupture discovered in the pia mater, or any of its vessels. The only appearance in the nervous substance itself, that I could discover, was a deeper tinge than natural in its cortical and medullary parts.

From the morbid appearances just enumerated, it seems evident, that the disease is of an inflammatory nature. It also would appear, that its principal seat is in the membranes investing the nervous mass of the spine, for we can observe here

the peculiar characteristic of membranous inflammation in the remarkably tortuous state of the vessels of the part.

It is another remarkable circumstance in the effects of this disease, that when it has not been so violent as in the last case, there is a watery fluid thrown out in the spinal canal, instead of the effusion above mentioned. And this may be always expected to occur when the course of the disease exceeds the third day.

In the treatment of Tetanus, the morbid appearances above related would seem at first view, to indicate blood-letting, as the principal remedy. There are, however, many arguments which would prove the impropriety of such an operation in this disease. We know that by general bleeding, the sanguiferous system of the brain is principally affected. By which means the energy of that organ may be diminished even so far as to induce syncope. Now in relating the phenomena of Tetanus, I have shewn that the nervous system of the brain seems to resist the disease. By abstracting blood, therefore, it is probable we weaken one of our most powerful antagonists to the morbid action, and thus diminish our powers of resisting the general destruction.

Experience also shews, that when blood has

been drawn, it has at least done no good, and seldom or never exhibited that buffy coat which is so generally met with in all other imflammatory cases.

Hence, then, according to these views, our first proceeding in the treatment of this disease should be to apply a blister to the whole length of the spine, and to act on the bowels by powerful cathartics. We should endeavour then to produce copious perspiration over the whole surface of the body, by means of active sudorifics, particularly those recommended by Doctor Latham, in cases so well related by him in the transactions of the London College of Physicians.*

There are many other circumstances relative to diseases of this system, which I have not yet arranged, and especially with regard to the means of judging when we are to apprehend the approach of Tetanus. As we know that a wound, however

* It is a curious circumstance that we can produce this disease by artificial means. For when an animal has been decapitated, if we instantly introduce a slender wire down the spine, so as to irritate that nervous system without compressing it, the muscles of the animal are immediately thrown into that state which is peculiar to tetanus.

lacerated, will often not produce the disease, while the slightest scratch may excite it.*

* As it would have extended this paper considerably beyond the proper limits, were I to have given the whole of this subject in detail, I beg to refer the reader to a treatise on Tetanus and Hydrophobia which I have published several months after I had the honour of laying the above before the Association of the College of Physicians in Dublin. I was induced to do this, as several misrepresentations had been circulated respecting the treatment I recommended, and even with respect to the morbid appearances observed on dissection.

THREE CASES

OF MELÆNA

IN WHICH THE MOST DECIDED GOOD EFFECTS APPEAR TO HAVE BEEN PRODUCED BY THE EXHIBITION OF THE

OIL OF TURPENTINE,

BY

WILLIAM BROOKE, M. D.

LICENTIATE OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, PRESIDENT OF THE ASSOCIATION, M. R. I. A. &C.

Read, Jan. 2nd, 1817.

On the 17th of October, 1814, Mr. S—— consulted me for some complaints which appeared to be simply and strictly dyspeptic, and which I conceived had been induced by the great and sudden change in his manner of life, which had taken place some months before. For years, Mr. S—— had lived in the country, where his mornings were actively spent in business, and his evenings in the society of long known, and much esteemed friends: this mode of life he suddenly relinquished, and came to Dublin, a comparative stranger, and without occupation that interested or amused him. Mr. S—— was about fifty years old, unmar-

ried, extremely regular and temperate, of a religious turn of mind, and hitherto healthy. Some light bitter infusion was ordered, with pills composed of purgatives and assafœtida, to be taken each night. His diet was regulated with a view to prevent flatulence and acidity, of which he particularly complained; and moderate exercise on horse-back, and cheerful company were recommended. He continued on this plan for a fortnight, and with some benefit; the bowels, however, did not then appear to have been sufficiently emptied; he had occasional fullness of the abdomen, with dull pain, increased upon pressure, particularly about the pit of the stomach, and regularly towards evening, the pulse was quickened, and in the mornings, his tongue was white and furred, with thirst, and bad taste in his mouth. I ordered three grains of calomel, one of antimonial powder, and six grains of the compound extract of colocynth, to be taken at bed time, and on the next morning, a saline purging draught, warmed with tincture of senna: the quantity of dark bilious matter which was brought away, and the decided relief obtained, encouraged a repetition of the purging, so that, by the 13th of December, he had taken the pills and draught four or five times, and always with marked good effect. The quantity of black, tar-like matter, which came away on each exhibition of the purgatives, was very considerable; the celerity of the pulse did

not now occur, in the evening the tongue was clean, yet his strength, appetite, and sleep were rather on the decline, and he was much teazed by flatulence, general uneasiness, and sense of soreness in the epigastric region. From this period to the 22nd of December, he continued pretty much the same, the tone of his stomach was supported, and its tendency to acidity corrected by the tinctura acet. ferri, given in ginger tea; or by the compound infusion of gentian, with carbon-ammoniæ, varied as seemed expedient; and his nights were rendered tranquil by camphor mixture, with æther, and the bowels kept regular by common mild aperient pills, or magnesia. Nothing, however appeared to have any effect in rendering the alvine discharge more natural, the stools were almost constantly black,* and liquid, with little smell, and more resembling tar than excrement.

In consultation, it was determined to try mercury, and five grains of the blue pill was ordered night and morning, and a mixture composed of extract of taraxacum, suspended in water, with some tartarate of soda and kali, twice a day. He soon became disgusted with the mixture, when a light infusion of colomba, with spiritus ammoniæ aromat, was substituted, and the regularity of his bowels preserved by mild aperients, or injections, which it was necessary to exhibit pretty frequently.

* At first I thought this colour might arise from the tinc. ferri, but on giving it up for several days, no change took place.

Until about the beginning of February, his mouth did not become sore, though the blue pills had been regularly taken; and during this time, no marked alteration took place in the appearance of the alvine discharge: now and then a stercoracious stool came away, but in general, they were thin and pitchy: his strength and appetite, however, improved, and immediately on the salivation coming on, the morbid appearance of the stools entirely ceased; the mouth continued sore for about two weeks, during which time, the stools were natural, and often extremely yellow. He somehow caught a severe cold, which reduced his strength much, and on the twenty-first of February, pitchy motions again appeared, with increased uneasiness about the scrobiculus cordis. It was again agreed upon, on consultation, to have recourse to mercury, and a portion of the ointment was directed to be rubbed in each night. On the second of March, the gums became sore and inflamed, the stools were also considerably improved, and none of the pitchy matter came away for some days. On the fifth, all our hopes were disappointed: during that night, he passed three or four stools, appearing entirely to consist of thin tar, and perfectly inodorous. He was much sunk, the lips, tongue, and gums, were quite white, and the countenance singularly palid. Asses milk, and the usual restoratives were recommended, and with the view of tranquillizing his nights, we

prescribed an infusion of hops, with some of the tincture of the same. Aware of the efficacy of oil of turpentine in those complaints, which are supposed to depend upon an increased action of the capilliary vessels of the mucous membrane of the stomach and intestines, I determined on giving it a trial, and accordingly ordered twenty drops made up with cinnamon water, and syrup of orange peel, into a draught, to be repeated thrice a day. On the second day after commencing the turpentine, the stools became natural, and not an appearance of the pitchy matter was afterwards to be detected. The turpentine was continued for nearly three weeks, although the melœna appeared to have been entirely cured by the first few days of its exhibition: the gentleman was prejudiced in its favour, and there appeared no reason for not indulging him. But however completely this formidable complaint seemed to have been at last subdued, the ravages which it had committed, appeared every day more and more irreparable: the emaciation could not be arrested, and the distress of his stomach increased, the cardialgia, heart-burn, and flatulence, resisted almost every effort towards relief: the stomach and bowels seemed totally incapable of digesting or assimilating any article of food or drink, even when taken in the smallest quantity: whatever he eat or drank, became acid in a few hours, producing vomiting of an extremely acrid matter, or general

uneasiness along the whole of the alimentary canal, and frequently very sharp pains.

None of the alkalis in any of their forms of preparation, seemed to possess any decided influence in either preventing or relieving the pysoris, the mineral acids proved equally ineffectual; well calcined magnesia only was found capable of arresting the sourness, and it fortunately retained this power to the last. In a few hours after each meal, the heartburn commenced, accompanied, particularly in the evenings, with severe and sharp pains in the abdomen. A moderate dose of magnesia always relieved the acidity, but the pains continuing even after the heartburn had ceased, recourse was necessarily had to opium to procure a tranquil night. At first I conjoined the magnesia and opium, hoping thereby to answer both indications at once, and was much surprised at the total inefficacy of the opium when so given even in a full dose: its power of allaying pain or inducing sleep seemed to be entirely destroyed by the acid which it met with in the stomach; I therefore changed the mode, and separated the remedies, giving the magnesia first, and when the heartburn was relieved by it, the opium, which then never failed to procure a good night, though given in a very moderate dose. Mr. S. was so perfectly aware of this fact, that he latterly took the management of the magnesia and opium into

his own hands, and was always certain of a quiet night, unless through impatience for an early sleep, he took the anodoyne before the acidity of his stomach had been entirely subdued by the magnesia. His bowels were kept regular by emollient glysters, and in this way he lingered on without much inconvenience until July, when the lower extremities becoming suddenly œdemetous, he died. We were unable to obtain permission to examine the body.

CASE II.

Mr. T. B. applied to me on the 8*th* of November, 1816, on account of pain occasionally occurring in the belly and stomach, and frequently succeeded by vomiting, accompanied with confined bowels, loss of appetite and general debility; the pain always began about the navel, and continuing with more or less severity for an hour or more, worked up, as he termed it, and getting into his stomach, produced vomiting, by which he was immediately and perfectly relieved. A paroxysm of this kind commencing about five o'clock, he had regularly suffered with increasing violence, for five or six mornings, and occasionally, had a slight

return of it during the subsequent part of the day. What he threw up in general, amounted to about three or four pints of a watery, mawkish, sour, and somewhat bitter, dark coloured fluid. His pulse was calm, the skin cool, tongue not loaded but white; there was no fullness or hardness to be perceived in any part of the abdomen, nor did he feel pain nor pressure when the fit was over, but during its continuance, the least pressure on the stomach induced a most disagreeable sensation, amounting almost to the point of inducing syncope. This gentleman is about twenty-two years old, thin and tall; of a delicate constitution, and since his fourteenth year, very liable to dyspepsia; his habits have always been extremely regular and temperate, but lately had suffered much mental anxiety. I prescribed some common purgative pills to be taken in small doses, until they freely opened the bowels, and then recommended a course of stomachic medicines, consisting of colomba, carbonate of soda, rhubarb, and carbonate of iron, with tincture of cardamom, and the vol. aromatic spirit to be entered upon, with exercise and regulated diet, and advised hot fomentations in case of a return of the pain.

He immediately had recourse to the opening pills, which before night operated fully and well; he slept well, and had no return of the pain, or vomiting on the next morning. During the 9*th*

he took the stomach medicines, and felt pretty well though feeble, and without any appetite: on the 10*th* he was awoke early by the pain rather more severe than usual, and in about two hours vomited the full of a large bason of a fluid such as has been already described. He was much exhausted, and complained of an unnatural and overcoming sensation about the stomach, with inclination to vomit upon the slightest motion or exertion. Pulse 80 and small; tongue clean; belly soft, and rather drawn in. In the evening he was stronger and better, had taken some light nourishment, and had not vomited, though he felt sick, and inclined to acid eructations and hiccup. I repeated the purgative pills with a small quantity of calomel, and at his own request, ordered a mixture composed of calcined magnesia, tinct. sennæ. and elect. scammonii, which I had given him some years before for an acidity in his stomach, with great success.

11*th*.—A good night, no vomiting, no effect from the pills. Cont. pil. et mistura.

Nine o'clock P. M.—No motion, belly full and hard; sourness of the stomach and sickness entirely relieved by the mixture.—R. decoct. comm. uncias decem, olei olivæ uncias duas sul. mag. sesquiunciam, tinct. sennæ unciam spir. athe. oleosi drach. tres. m. fiat enema statim injiciendum.

12*th*.—Enema produced two large motions, chiefly composed of black hard lumps, the passing of which gave him very severe pain ; afterwards he had a good night. Complains now of nausea and singultus ; some fullness about the navel, with tenderness on pressure ; tongue white ; thirst, yet refuses every kind of fluid. Pulse 90, skin warm. I prescribed a mixture of sul. magnesiæ, in infusion of roses, with tincture of senna, elect. of scammony, and a few drops of sulphuric acid. The first dose relieved the nausea, oppression and hiccup, and the third produced a large liquid stool, perfectly black and inodorous, and shortly afterwards another quite similar, with immediate relief.

13*th*.—A good night ; several stools, each consisting of about six ounces of a black looking fluid, staining the pot of a deep olive colour, and of a more solid matter, somewhat like boiled lever, without any smell ; thirsty and inclined to nausea. I ordered a saline effervescing mixture, with some stomach tincture.

14*th*.—Within the last twenty-four hours, has had four evacuations perfectly similar to those of yesterday, but much more copious ; feels no ailment ; disinclined to leave his bed. Pulse very feeble.

R. aqu. font.—Cinnamomi aa. semunciam, olei terebinthinæ guttas viginti quinque, syrupi aurant. drachm.—M. fiat haustus ter die sumend.

15*th*.—Took only two draughts yesterday; about four hours after the last, he passed a large motion chiefly composed of natural looking fæces, floating in a watery fluid of a deep olive colour.

16*th*.—No motion since ten o'clock P. M. of the 14*th*; three draughts yesterday; feels general uneasiness, with want of appetite, particularly for breakfast.

Rep^{r}.—Statim mixtura laxans ut die 12mo. præs.

17*th*.—Two dark coloured, offensive motions: Urine copious, and deposits a thick white sediment; took a draught at bed time, and another at four o'clock this morning; had a large, and natural-looking, yellow motion.

Cont. Haustus.

18*th*.—A very restless night, from acidity in the stomach, with occasional sharp pains, which he attributes to his having incautiously taken some negus after dinner, made of acid Teneriffe wine: two motions this morning, quite natural.

Cont. Haustus.

21*st*.—Has taken a draught, M. et V. motions quite natural.

Omitt. Haustus.

N. B. This gentleman went to the country after Christmas last, and shortly afterwards, was attacked with the pain and vomiting, as in November. Calomel and Epsom salts were administered very freely, from the similarity of his feelings to those which he had suffered in November. Mr. B—— was induced to examine his motions, and observing them to be pitchy, and perfectly inodorous, mentioned to his medical friend the very decided benefit he had received, under similar circumstances, from the oil of turpentine, in November, and begged he would order it for him; on the second day after its commencement, the stools became natural, and he has continued well since.

CASE III.

Miss M——about forty years old, of a healthy constitution, very regular, and extremely moderate in her habits: was suddenly seized after her breakfast on the morning of the 27th of January, 1817, with vertigo and faintishness: on being supported into the garden, immediately in the rere of the room, she became sick, and vomited a large quantity of a matter, which appeared to her friends to be black blood: as Miss M—— resided some miles from Dublin, several hours

elapsed before she could procure the assistance of her friend, Surgeon Hallahan: on his arrival, he found the lady in bed, and, as he reported to me, complaining much of an odd and distressing feeling about her head, with occasional inclinations to vomit, and great general weakness. The pulse was quick and frequent; skin, warm; her bowels had not been opened for three days, a circumstance by no means uncommon with her: two drachms of the sul. magnesiæ were ordered to be dissolved in some infusion of roses, with a few drops of sulphuric acid, and to be repeated every two hours, until the bowels were freely evacuated: on the next day, Mr. H——found her pretty much the same; the third draught, produced several copious stools, composed in a great degree, of grumous blood, with some very putrid excrement; on her attempting to get out of bed in the morning, her head became giddy, and she again vomited half a bason full of black, bloody matter, mixed with some tea, which she had just taken. Mr. H——directed one of the laxative draughts to be occasionally taken during the day, and wishing for assistance, I was called upon to visit her with Mr. Hallahan, on wednesday the 29th. Her pulse was then 100, very small and soft; the skin warm and dry; her countenance sunk and much changed, and her lips and nails quite white: she complained of no pain; bowels were soft and flat, nor did pressure any where on the abdomen

produce even uneasiness. There was no suspicion of any visceral obstruction; she slept tolerably well, and during the last twenty-four hours had six copious liquid stools; the four first were putrid and bloody, the two last, were like thin tar, and perfectly inodorous: she complained much of general debility, and was very apprehensive of a return of the vertigo and vomiting; we prescribed four draughts, each composed of an ounce of aq. cinn. syrup aurant. drach iij. & 25 drops of the ol. terebinthinæ rectif: one to be taken every sixth hour.

30*th*.—Three draughts had been taken before our visit this morning, she found them very gratefully warm, and by expelling much wind, appeared to relieve the nausea and lessen her apprehensions of the return of the vertigo and vomiting: during the night she had four small stools of the same appearance as the two last, which were passed yesterday. Pulse 90 and soft, skin cool, tongue clean, feels stronger and more confident.

Repetr. haustus cuique addendo
Olei terebinthinæ rectificati guttas decem.

31*st*.—Has taken three of the draughts; no motion or vomiting; pulse 88; tongue white; belly flat, but hard; a good night; feels costive, and wishes for physic.

Sumat tartar. Sodæ et Kali sesquidrachmam ex jusculi tenuis poculo omni horâ ad alvi solutionem.

February 1*st*,—Previous to getting the salts yesterday, she suffered much sickness, but without any vomiting; the third dose operated, after which she became more comfortable and relished her drink; four motions during the night, they were watery, black and inodorous; pulse 80 and very soft; tongue clean, skin cool, belly soft and flat, countenance natural though very palid. We ordered some carbonate of ammonia accurately saturated with lemon-juice, with a light aromatic, and a few drops of Hoffman's anodyne liquor. I saw no more of this lady, but understood from Mr. H. that she had no further morbid evacuations, and gradually recovered her strength.

The melaina nousos was not unknown to Hippocrates. He describes two kinds: in the one, the patient vomits a black bile, like the lees of wine, sometimes bloody; sometimes a thin pituitous saliva, acid like vinegar; or a pale green bile. When the matter vomited is black and bloody, it smells putrid, "φονου οζειν," When the matter is acid, the fauces are inflamed, the teeth set on edge, and so concentrated is this acid, that it effervesces with the earth on which it falls, την γην αιζει, When the patient vomits, he feels much relieved, and is equally unable to bear emptiness or fullness, for, when empty, the stomach is

flatulent and sour, and after eating, a disagreeable weight is perceived in the bowels, the breast and back feel as if pricked with pins, a slow fever, with head-ach, dim sight, weariness of limbs, and blackness of the skin come on. He advises bleeding, if the patient be strong, with frequent purging, thin drinks, whey and milk; that he should use a cooling light regimen, and avoid much exercise, exposure to the sun, and venery. Under this management, the disease will yield to time, and getting better as the patient becomes old, tends not to shorten life. The other kind, attacks those who are weak and thin, who have a yellow skin and light eyes: the longer the disease exists, the worse it becomes; at times, a few drops only are vomited, and again, a small cup-full or two; the food is also occasionally rejected, and with it bile and phlegm; a fever, with chilliness, precede the vomiting, and general pains are experienced after it; grumous bile is vomited as the disease advances, and the same rejected by stool, together with the food little changed, and the patient frequently becomes paralytic without any relief of the other symptoms. In this you must purge freely, "και κατω και ανω," give Asses' milk, use a light, soft, cool and nourishing diet: a little generous white-wine diluted, must be allowed; strong exercise, by walking, should be daily used, but the heat of the sun avoided. With every possible care, however, this species ends unfavourably.

but does not prove very tedious. It will be seen from the above, which I have translated, I hope correctly, though not actually verbatim, that Hipocrates observed, and has described two distinct species of the morbus niger.* In the first, the discharges by vomiting are mixed, partly blood, partly bilious, with a thin and very acid phlegm. It is easily relieved by V.S, purging, and the antiphlogistic regimen, and is not fatal. In the second, the vomiting is entirely bilious, no mention whatever of blood being made; it occurs in debilitated and bilious people; is incurable, and is only mitigated by such means as prevent an accumulation of bile in the primæ viæ, or carry it off, if already accumulated. Hoffman in his Med. Rat. Syst.† describes the disease pretty much after Hippocrates; he adds, that the disease is seated in the stomach and spleen, and proves by dissection, the blood to be derived from these viscera. In many cases after death, the spleen was found tu-

* Hip. de morbis Lib. 2. Sect. v. P. 486, Fol. Edn. Foesius. Frank. 1624. I was a good deal surprised at the inaccuracy of the learned Author of the London Medical Dictionary, (See Art. Morbus niger, P. 218, Lond. 1809). The two kinds are there described, and reference made to Hip. Lib. 2 as above. What edition Doctor Parr consulted, I cannot say, but no such disease as the Doctor describes as the second kind, is to be found in Foesius's Edition.

† 5 Vol. Ven. 1733.

mid, and the vas breve greatly enlarged. The vessels also of the stomach were distended with black blood, similar to that which had been vomited and purged before death. He quotes several authors who had observed similar morbid appearances on opening the bodies of those who had died of the disease. He endeavours to shew that it is a symptomatic disease, arising, in general, from suppressed menses and hæmorrhoids, and not unfrequently attacks, after the cessation of their catamenia, those delicate women who had been subject to much mental anxiety. He appears to have been more fully aware of the frequency of the black discharge by stool, than Hippocrates had been, and justly asserts, that in such cases, the matter does not come from the stomach, but from the small intestines; and says, that in some dissections, he found all the mesaraic vessels distended with black blood, and a quantity of a similar fluid extravasated in the cavity of the intestines. When the melæna proceeds from a diseased spleen or liver, when the discharge, particularly, that from the bowels, is bloody, pitchy, and highly offensive, and is accompanied with much debility and faintishness, the disease is not to be cured. Sauvages defines the disease with sufficient accuracy. Fluidi atri, per superiora, vel inferiora frequens rejectio. A blackness of the stools occurring without griping pains, constitutes, as he says, the character of this

disease; and these evacuations diluted with water, either verge towards a yellow or a black colour as the liver or spleen may be primarily affected. He laments that the different species of the disease have not been distinctly marked, which he attributes to physicians having only lately discovered that the melæna was not so rare a disease as had been supposed. Sauvages is the only author I have met with, who at all notices the absence of smell, vix foetidas, in the alvine discharge, a circumstance which I have often observed, and which I think only occurs when the discharge is purely bile, changed so as to appear like tar, and quite unmixed with either blood or common excrement. Cullen says, "I am aware blood is "known to assume that appearance where it has "stagnated for any length of time in the alimen-"tary canal." But he also allows that it is possible that the bile may put on a black viscid appearance, and give a real foundation for the appellation of an *atra Bilis*.* Melæna, Cullen supposes to be a venous hemorrhage from some part of the internal surface of the alimentary canal, and that it is a symptomatic disease. If from any interruption of its proper course, the blood be accumulated in the veins of the vena portarum from tumified spleen or obstructed liver, that accumulation must resist the free passage of the blood

* First Lines, MXXIX.

from the arteries into the veins; this again must produce some congestion in the extremities of the red arteries, and therefore some increased action in them, which must be determined with more than usual force, both upon the extremities of the arteries, and upon the exhalents proceeding from them, and this force may occasion an effusion of blood.* This doctrine, though brought forward to explain the hæmorrhoidal flux, applies equally well, he says to the morbus niger.

Doctor Home† has given three well marked cases of melæna, and which he supposes were idiopathic; two of the patients, however, had been previously affected with intermittent fevers, so that some visceral obstruction in the abdomen may have existed. Home bled, purged gently, and gave vitriolic acid with great advantage, but found emetics very hurtful.

In Portal,‡ we find an interesting memoir on melæna; the enlargement of the spleen, in the case of Fusee Aublet, had been considerable for some time before his illness; after the first attack of melæna, in which the discharges were copious, the fullness of the spleen disappeared, and the pa-

* DCCLXIX. † Clinical Experiments.

‡ Memoires sur la nature et le traitement de plusieurs maladies. Tome deuxieme. Paris 1808.

tient, by the occasional application of leeches to the anus, enjoying good health for two years. Another attack, induced by a fit of passion proved fatal. On dissection, the spleen was found much enlarged, soft and full of black blood, the veins also of the spleen, with the vasa brevia and the veins of the adjacent viscera, were enlarged and turgid with black blood, while the membranes of the stomach and intestines were of a singular whiteness. The stomach and duodenum contained in their cavities a quantity of the same black fluid, which also could be easily pressed out from the vessels or their coats. The liver was natural in size, but much harder than usual. Portal argues with much ingenuity, that the blood discharged, is formed of arterial blood, and as his book is not in very general circulation here, his own words will be more acceptable than any translation I might attempt. "Le volume tres considerable de la rate, que l'ouverture du cadavre nous a fait connaitre a du necessairement donner lieu a une forte compression des branches arterielles contigues aux veins qui rapportent le sang de la grosse tuberosité de l'estomac dans la veine splenique, et forment ensemble cet appareil, connu sous le nom des vaisseaux courts (vasa brevia.)

La compression des arteres, que nous venons de designer, a determiné par un mecanisme facile

a concevoir, le reflux du sang dans les autres branches de l'artère celiaque, de la gastrique superieure gauche et de l'hepatique; comme le foie était en même temps moins volumineux et plus dur, et que, par conséquent, le diamètre des artères de ce viscère était moindre, l'artère gastrique superieure gauche, et l'artère gastrique inferieure droite, auraient reçu d'autant plus de sang, que les autres rameaux des deux grands artères collatérales, la splenique et l'hepatique, étaient plus retrecies, d'ou il est resulté que l'estomac a reçu plus de sang que les veines avec lesquelles s'abouchent les arteres n'en pouvaient admettre, et qu'alors ce defaut d'equilibre entre la circulation veineuse et arterielle a forcé le sang arteriel a s'epancher dans l'estomac, a y perdre la couleur vermeille, qui le caracterise, et a s'alterer au point d'occasionner les meprises des medecins, qui, etrangers aux connaissances anatomiques et physiologiques, l'ont souvent pris pour de la bile, et ont accusé le foie, ou la rate d'une foule des desordres, auxquel ils n'avaient concouru que d'une maniere partielle, et quelquefois point du tout.* He then adds, that this black matter, vomited and purged in the melæna, differs solely from the blood vomited in the hematemesis, or voided from the bladder in hematuria, in being more deeply blackened: he does not pretend to

* See Page 130.

deny, that under some circumstances, venous blood may be vomited, but does not think it satisfactorily proved.

In the second case given by Portal, the liver was soft, and greatly enlarged, and the spleen smaller than usual, and hard; in both cases, the natural circulation was disturbed, and the blood being carried into the gastric arteries in greater abundance than the correspondent veins were able to receive, necessarily produced an extravasation of blood into the stomach.

The third case, is one in which there was no visceral obstruction that could be discovered after death. Portal attributes the disease to long continued anxiety of mind. The depressing passions he conceives, induce a spasm of the diaphragm, of the abdominal muscles, and of the muscular fibres of the intestines, by which the entire system of the vena portæ is compressed, and the circulation carried on in it in a slow, imperfect, and toilsome manner: while the circulation in the gastric arteries is natural: the blood, therefore, is carried to them in great abundance, but the veins not being able to receive it in like manner, it is poured into the cavity of the stomach, and vomited. In this way, he endeavours to prove, that the depressing passions are equally capable of producing melæna, as visceral ob-

struction, and that even sometimes, they induce the disease more quickly. Portal admits that there are three distinct kinds of vomiting in the melæna; blood not changed; blood totally changed, so as not to be recognized; or black matter; and bile, which may be also of a deep black. His method of cure consisted chiefly in applying leeches to the anus, in exhibiting thin, cooling, and refreshing drinks, with very gentle laxatives and glysters. In some cases, he gave chamomile tea, lime water, and light chalybeate waters; and in aged and scorbutic habits, he ventured upon bark and Spanish wine.

Perfectly coinciding in the opinion of Sauvages that melæna is not so rare a disease as had been supposed, I gladly embrace the opportunity of offering to the consideration of the Association these cases, which I have faithfully recorded from the notes daily taken during the attendance on each. The cases I conceive are valuable, as illustrating the opinions which have been given by the different authorities I have cited. In the first case, I believe the matter evacuated was altogether blood, *totally changed;* many of his stools it is true, were perfectly inodorous, which led me to suspect they were bilious, but no dilution with water, ever produced any yellow colour; we had no reason to suspect, from any external appearance, visceral obstruction, and I could only

attribute the disease to the effect of the depressing passions.

In the second case, the discharges were most decidedly bilious, the matter vomited was mawkish and bitter, the stools, though black like tar, tinged the vessel of a deep olive, and on dilution, became yellow: his constitution had been delicate for years before, his habits very sedentary, and just before the attack, he had suffered much mental distress from the loss of a very near relation.

In Mr. S——'s case, I gave the spirit of turpentine as a styptic, its success encouraged me to give it in the other two. I have no doubt of its power in checking the hemorrhagy, and of course, deem it a most valuable medicine in the disease. I however by no means contend, that we are to confide in it alone; the cautious and well informed physician will, in each case, diligently search for the remote causes, and apply their appropriate remedies.

P. S.—I owe it to the ingenuity of my scientific friend, Doctor Egan, to remark, that if the two distinct states of melæna, sanguineous and bilious, as detailed in the foregoing cases, really exist, it is clear that an early discrimination of them must be of consequence, more particularly as the one is so much more curable, or within the reach of

art than the other, and besides, admits of more energetic means of relief; to obtain this end, therefore, it appears to me, that nothing more is necessary than the examination of the dejections, by submitting them to the action of boiling water.—If sanguine, the lymphatic and fibrine parts will be coagulated and precipitated in clots, that will not pass the filter. If *bilious*, the entire will quickly dissolve, will communicate to the water a yellow tinge, and will easily and wholly pass the filter. This, or some other mode of distinction, would appear the more necessary, as the bile, in its various forms of morbid degeneration, so often assumes that very black colour, which induced the ancients to call it, Atra Bilis, and which, in appearance, so much resembles blood. It is however possible, that where the sanguine discharges have been so long retained in the intestinal canal as to emit on their evacuation a considerable fætor, indicative of a previous chemical decomposition, that the blood may in such cases, have entirely lost its property of coagulating by heat; on such occasions, the peculiar fætor of putrid blood, and the tinge given to boiling water, would seem to be our best discriminating guides.

ON

DROPSY AND APOPLEXY,

BY

WILLIAM STOKER, M. D.

MEMBER OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, VICE-PRESIDENT OF THE MEDICAL ASSOCIATION, MEMBER OF THE ROYAL MEDICAL SOCIETY OF EDINBURGH, AND ONE OF THE PHYSICIANS TO THE FEVER HOSPITAL AND HOUSE OF RECOVERY, CORK-ST. &C.

Read, April 14th, 1817.

The following history of disease appearing to me to be interesting, and perhaps not uninstructive as to the pathology and treatment of certain forms of dropsy and apoplexy, I beg leave to lay it before the members of this Association, with the intention, that if approved of by them, it should be published in their transactions.

It consists of two parts; the same person having been affected with distinct forms of disease, and some time intervening, both probably produced or materially influenced by similar predisposition and exciting causes.

February 21*st.* 1817. Eleven o'clock P.M. Mr T. W——aged twenty-eight years, married, of full habit; stature rather under the middle size, short neck, but with a roomy and well formed chest; very muscular, accustomed to active employment, but much exposed to the vapours arising from large quantities of melted lead, whilst superintending extensive lead works of which he is a proprietor, and in the same way, to rapid alternations of heat and cold.

About a fortnight ago, he was attacked with a cough, hoarseness, and insuperable drowsiness towards evening, which he attributed to having caught cold; is not confined to his room more than eight days; for the last eight months he has had an eruption, (the lepra vulgaris) which extends over the entire of his right leg, and during the same length of time, he has been much disposed to nausea, cardialgia, and vomiting, and for some time past, he bathed the affected leg daily in cold sea water.

At present, his respiration is quick and laborious, cannot lie in the horizontal posture without exciting a sense of suffocation; frequent hard cough; expectoration scanty and difficult; feels a sense of tightness, rather than pain in the chest, and complains of debility and loss of rest; ana-

sarca prevails generally over the face, trunk, and extremities; the legs very much swelled, and retain the impression made by the finger; the leprous eruption on the leg is quite dry and scaly: this is the eighth day since the commencement of the hydropic symptoms: skin dry, and leuco-phlegmatic; pulse quick and small; urine scanty; bowels have been kept regularly free for the last three or four days by laxatives prescribed by Mr. Adams of Parliament Street; but neither these nor some hyrogogues which were employed, have prevented the progressive increase of the dropsy.

I directed a blister to be applied to the sternum, a bolus of calomel, gamboge and jalap to be immediately given, and a mixture with tincture of squills, and spiritus ætheris nitrosi, to be given every two hours through the night.

23rd.—Ten o'clock A. M. passed a restless night; neither the orthopnœa nor the other hydropic symptoms have declined; the blister has risen well, and the bolus operated fully, three or four times, attended with a more free discharge of urine than during the last seven or eight days; pulse fuller, and some pain in the left side, increased on inspiration; skin dry; tongue loaded. I now directed him to be bled from the arm, and finding the pulse and breathing improve, the blood was allowed to flow to sixteen ounces, after

which he felt much relieved, and some of the pillows being taken from his back, he could approach more nearly to a recumbent posture; the blood became highly buffed, shortly after it was drawn.

The discharge from the bowels was still promoted by an electuary of cream of tartar and jalap; James' powder combined with ipecacuanha, ordered to be given every eighth hour.

23rd.—Evening, the difficulty of breathing and orthopnœa, which were much relieved for some time after the bleeding, are now very urgent; pulse full and quick; pain of side severe; electuary caused several watery stools, and urine increased; the venesection was repeated, and gave much relief, and the pulse continuing firm, twenty ounces of blood were then taken away, after which he was able to lie flat in the bed, and the sense of oppression was much diminished.

A sudorific mixture, with acetated water of ammonia, was directed for him for the night.

24th.—Ten o'clock A. M. got a tolerably good night; breathing, however, still difficult and hurried, and the orthopnœa is in some degree returned; pulse 90, and full; blood sizey, cough severe; sixteen ounces of blood were then drawn from

the arm, and a draught with twenty drops of the tincture of digitalis, to be taken every twelfth hour, together with a pill of two grains of ipecacuanha, and to use occasionally an expectorant mixture, with syrup of squills, for the cough.

In the evening, a return of the distressing symptoms rendered it necessary to take twelve ounces of blood from the arm.

25th.—Got a good night, sleeping on his left side, and the head and shoulders low; the cough is much easier; expectoration is more free; and respiration not more than 25 in the minute; pulse ninety, very full and firm, but with slight intermissions; does not feel his strength impaired; blood still sizey: venesection was again employed, and ten ounces of blood drawn; the draughts, with tincture of digitalis, the pills of ipecacuanha, and expectorant mixture continued.

In the evening, was much better in every respect; pulse 76, but with some intermission; anasarca much diminished; bowels open; urine free. Continue the draughts, with tincture of digitalis, the pills, and expectorant mixture.

26th.—Rested well; no return of a difficulty of breathing, and the dropsical swellings have entirely disappeared; is at present, however, much

distressed by a violent palpitation and pain at the region of the heart; pulse so slow as 46, with intermissions at every third beat; bowels open, urine free.

The draughts with tincture of digitalis, were discontinued; and pills of assafœtida, with draughts of infusion of valerian, ammoniate tincture of valerian, and of tincture of castor, were directed to be taken every fourth hour; a blister to be applied over the region of the heart.

In a few days the irregular action of the heart was removed; and health rapidly returned under the use of occasional purgatives alternated with tonics, iceland-moss, and oil of juniper, which was directed on some anasarca reappearing in the legs after the patient began to sit up. On the 20*th* of March, however, though he had been then enabled for ten or twelve days to take exercise on horseback, and to transact his ordinary affairs, he began to complain of dimness of sight, and a sense of weight over the eyes; these organs however, did not exhibit any apparent signs of disease.

Under an abstemeous diet, the active employment of purgatives, the occasional use of errhines, a blister to the back of the neck, kept open by savine ointment, and by exposing the eyes to the vapour arising from æther, the affection of the sight seemed to be considerably relieved.

On the 31*st* of March, about 7 o'clock in the evening, I was called on to visit this gentleman, on account of sudden indisposition; and on my way I learned from his messenger, that his master on returning home, ate his dinner with appetite, the apartment in which he sat afterwards being very warm.

Shortly after I had arrived and sat by the bedside of the patient, he said in a feeble and rather in an incoherent manner, that he did not know what was the matter with him; I felt his arm which I held, violently seized with spasm; his head was drawn back, the limbs were rigidly convulsed, the countenance was distorted and livid; the mouth foamed; the jaws were locked; the eyes protruded; the vessels both on the head and neck greatly distended; the pulse of the wrist very full and strong, but not quick; breathing sterterous.

On opening the temporal artery, the blood gushed out rapidly, and when about eighteen ounces flowed into a bason, the breathing and circulation became more tranquil; the face less livid, and the features more relaxed; but on placing my finger over the orifice, the violence of the symptoms began almost immediately to return; the blood was therefore allowed to flow to at least forty ounces, and the symptoms gradually declined. Consciousness returned; the patient enquired res-

pecting what was doing for him, and understood the explanation given; he complained of pain under the left parietal bone, and the orbicularis muscle of the right eye seemed paralysed, as it lay much more open than the other; he however, could protrude the tongue without difficulty, nor was there any observable tendency of it, or of the features to either side; the use of the limbs was also perfectly restored on both sides, and he drank toast-water without difficulty.

The feet which were cooler than natural, were fomented with flannels and hot water; the head was shaved and washed with camphorated spirit of wine; and purgatvie fœted glysters were directed to be administered every third hour, till the bowels were fully opened. On leaving him for the night, I directed Mr. Young, an intelligent apprentice of Mr. Adams's, to remain by his bed-side, and that if he should observe such symptoms as I described, to attend the paroxysm in the evening, and if these supervened too rapidly, to procure a surgeon; that he should himself allow the blood to flow freely from the orifice already made in the temporal artery.

At midnight accordingly, when the fit again returned with violence, and the blood not flowing from the orifice made in the evening, he opened another in the opposite temple, and the discharge

of about twenty ounces of blood was followed by relief.

April 1*st.* 9 o'clock, A. M.—Got several hours of quiet rest after the second bleeding; the enemeta operated well, the stools dark and offensive; he still complains of pain under the right perietal bone, and the palpebræ of the left eye lie more open than those of the other; has almost constant itching in the nostrils; pulse at the wrist full, and both temporal and carotid arteries beat strongly; face pale, and he speaks now and then incoherently.

Having urgently requested assistance, and Dr. Percival being therefore requested to attend, I directed that unless the fit was actually coming on, nothing more should be done, besides warm fomentations of the feet, and cold washing of the head, till determined on in consultation; the fit however, returned at one with such violence, that immediate bleeding from the temporal artery could not be dispensed with, and accordingly twenty ounces of blood were then taken; and at three o'clock P. M. when Doctor Percival and I met, the patient was in every way much better; pulse tranquil: breathing natural, and mind collected; nor did he feel his bodily strength diminished; still however, he complained of some pain on the left side of the head, and fullness over the eyes, and also of distressing itching in the nostrils.

Purgative pills of calomel and assafœtida were now prescribed, and these to be assisted by purgative enemeta; blisters to the inside of the legs, and ice to be applied to the head, when the fit should return.

April 2nd.—Had no return of the fit; got a quiet night's rest, after the blisters had risen, and feels much better, though he appears to day to be morbidly sensitive, which is frequently relieved by a flow of tears; the pills have produced several copious dark offensive stools, and he has passed much limpid urine.

His recovery has been since progressive; no return of a fit; pain of the head has ceased; appearance of the eyes more natural, though still some dimness of sight in the right eye, and the palpebræ of it are more open than those of the other.

His mouth and gums are sore, attended with plentiful ptialism; a copious discharge from the neck, the blistered part of which has been kept constantly open by issue ointments; the patient has been removed into country air, and enjoined to use abstemious diet, and have frequent recourse to purgatives; it is in contemplation to have a seton in his neck.

P.S. *July* 16*th*, 1817.—This patient has continued to recover gradually since; the sight is still however, in some degree affected; the seton which was put in the neck discharges freely; and using a very abstemious diet, his flesh has not increased much; he uses shower baths with advantage.

Observations.

Laxity of the exhalants, debility of the absorbents, or disproportionate action from some failure of the power of these vessels, has been long the prevailing hypothesis both with medical lecturers and writers, to explain the hydropic diathesis; and notwithstanding the frequency of dropsy, and the very general failure of the usual modes of treatment in many forms of that disease, comparatively few have questioned the received opinions, or pursued any indication to cure, not in conformity with them.

Doctor Blackall's very valuable publication appears to me to promise much improvement, by exciting more general enquiry amongst physicians, as to the validity of the theory of dropsy, and by adding to the facts recorded by Doctors Home, Stock, and others, in proof of dropsical effusions and collections, being *in some instances*, connected

with the inflammatory or sthenic diathesis; and also that during the continuance of that state, it is to be relieved by bleeding. The foregoing case affords another example, in which high inflammatory action in the lungs and more generally coexisted with dropsy, and in which both trains of symptoms seemed to be connected with the same cause, having been simultaneously relieved by the same remedy.

The great ingenuity for which Dr. Cullen was distinguished in fashioning his theories, more than facts, seems to have sustained the opinion so long, that dropsies depend on debility of the extreme vessels, either alone, or connected with that of the system in general, and I am not aware of any pathological or anatomical observations which tend to prove it; on the contrary, the disordered action of the organs of chylification and sanguification, which almost always accompany dropsy, wherever situated, and the morbid appearances of those organs, so frequently discovered in those who die of dropsies, point to them as the sources of this disease; moreover, if laxity of the extreme vessels does ever occur, as probably happens in the last stages, there would be as little reason to consider it the primary cause, as that the disorganization of the kidnies and renal vessels so often found in those who die of diabetes, had produced this latter disease, an opinion which

few who are aware how much light physiology has thrown on its nature, are now disposed to entertain.

As neither time, nor the limited scope of these observations, allow of entering on a full discussion of this subject, I may briefly remark, that all causes which influence the proportion of the elementary principles of which chyle is composed, or with which the blood of the vena portæ is loaded, or which tend to disturb the due action of the liver and lungs, by which these elements are assimilated into healthy blood, may be supposed to affect the discharges from the emunctories or extreme vessels; if chyle be carried through the lacteal system in too great proportion to the action of the lungs, as occurs in those who live full, and lead sedentary lives, obesity will supervene; and in a further stage of disease, when the chyle is not itself duly assimilated, dropsy may succeed; on the other hand, increased or morbid action of the lungs or heart may produce disproportion in the coagulable and serous parts of the blood, and hence a tendency to inflammations or dropsy.

The dropsy that so frequently attends on diseased states of the liver, arises probably from an interruption of the necessary assistance to sanguification which takes place in this organ in health; many consi-

derations induce me to believe that the chief use of the liver is to bring the hydrocarbonous principles with which the blood in the vena portæ is charged more nearly to the state of fat, thereby rendering the blood better prepared for the changes it has to undergo in the lungs, as well as to provide for the due supply of fat in different parts of the body, for which we find no other secerning organ appropriated as we do for the other fluids; and such might be supposed an adequate employment for so extensive and complex a viscus, whilst the mere secretion of the bile hitherto deemed its only use, might be supposed rather secondary or residual; a secretion which is not always necessary even in warm blooded animals, as some are destitute of any organs for its reception.

The great bulk of the liver in the young of all animals, and in certain tribes of animals who fatten rapidly; the well known effect of mercury, leaving a tendency in young persons to obesity, its supposed effects on the liver, the greater predisposition of fat persons to hepatic diseases in hot countries, and wherever exposed to the exciting causes of that disease, all seem to indicate that the function of the liver is connected with the secretion of fat; and from such considerations, I was persuaded that the globules reported by Dr. Hewson, to be discovered in the blood of the ascending vena cava, which were not to be seen in the vena portæ, were either fat, or an approx-

imation to it, and so long ago, as the year 1800, with the assistance of my friend Doctor Colles, the accomplished professor of anatomy and surgery in the Royal College of Surgeons in Ireland, I attempted an experiment, which though being single, and too rough to draw any satisfactory conclusion from it, yet certainly favoured my previous bias.

A dog being suspended by the neck till nearly dead; blood was taken as quickly as possible both from the vena portæ and vena cava in separate cups, and having provided ourselves with a set of microscopic glasses, we hoped to discover the globular appearance already mentioned, but they did not afford any satisfactory conclusion; with the naked eye, however, it was obvious that the blood of the vena cava was of a much lighter colour than that of the vena portæ, and on mixing them in separate vessels with water at about 160°, and allowing them to cool, an unctuous film was found floating on the surface of the water in the bason which had the vena cava blood, and not on that in the other.

Having reported the result to my esteemed friend, Doctor Bostock, who has contributed so largely to the improvement of animal chemistry, I regret from several causes, to have to say I have not repeated this experiment, though encouraged

by him to do so, and though fully persuaded it deserved to be pursued more carefully and with better preparation than I had formerly in my power.

On the second part of this paper on Apoplexy, very few general observations must suffice; it is perhaps, instructive, as it shews that bleeding, which is by some recommended a sa prevention of that disease, may be prejudicial, as in this instance, it seemed to encrease the rapid tendency of the animal economy to make blood, as well as to its unequal distribution, which may be deemed if not the proximate, at least the exciting cause of appoplexy.

The superior advantage of taking blood directly from the vessels of the head, seemed also to be here remarkable, from the suddenness of the relief which followed, as well as the rapid return of the symptoms on momentarily checking the discharge from them. The rapidity with which the vessels within the head may be distended by even the ordinary action of the arteries, if any cause interrupts the return of blood by the veins, was strikingly illustrated by a very curious case, which my friend, the Surgeon General, shewed me lately in the Royal Military Hospital at the Park. A robust soldier, some time previously had received a sabre wound, which divided the os frontis and os parietale at their

juncture, by the coronal suture, to the extent of two or three inches; and when I saw the patient, the sides of the wound were very widely separated, and opened down to the membranes of the brain, which lay much deeper than the internal table of that part of the cranium, I should suppose, more than half an inch; pressure, however being made on the jugular vein, this opening immediately was perceived to begin to fill, and in the time of three or four ordinary pulsations, (the man's pulse not being more than 70,) the matter which lay on the surface of the membranes rose as high as the wound, and soon after discharged itself freely by it, without seeming to excite any uneasiness to the patient.

It may be said that the inference to be deduced from this last case would be, that greater benefit might be expected from opening the jugular vein, than the temporal artery; but having so often witnessed the rapid relief of apoplectic symptoms by critical epistaxis in fevers, and the blood on all such occasions being arterial; and having still more generally had an opportunity of observing equally remarkable relief of similar symptoms by opening the temporal artery, I now prefer it; and it has this peculiar advantage, that the facility of taking blood from that artery, is generally proportioned to the necessity there is for it.

A

CASE OF

CHRONIC RHEUMATIC INFLAMMATION,

Successfully treated by Bandages;

BY

RICHARD GRATTAN, M. D.

FELLOW OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, IN IRELAND, AND PERMANENT PHYSICIAN TO THE FEVER HOSPITAL, AND HOUSE OF RECOVERY, DUBLIN.

Read, March 12th, 1817.

The frequent revolutions which medicine has experienced, both in its theory and practice, from the earliest period down even to the present moment, would seem almost to countenance the opinion, that it was a pursuit entirely destitute of any fixed or certain principles. However, to those who consider the nature of the animal economy, and the numerous circumstances which influence the actions of life, it cannot appear surprising,

that doctrines the most different should constantly prevail, as well with respect to the cause as to the treatment of disease.

It is not with medicine as with other arts, in which each effect can be referred to an obvious cause, and predicted with certainty; for in the animal system a different result is often produced under circumstances apparently the same. Sometimes remedies of acknowledged efficacy are known to fail in cases to which they seemed peculiarly applicable; and frequently the exertions of nature alone are found to accomplish a perfect recovery in the most aggravated instances of disease.

In some cases of disease, from the very nature of the complaint, all remedies must prove unavailing. An active and useful remedy, when exhibited under such circumstances, therefore, often falls into disrepute; while on the contrary, it sometimes happens that an inefficient application seems to effect a cure, because administered in a disorder which would have disappeared equally soon, and with equal certainty, had no remedy been applied. Hence arises much ambiguity, and apparent inconsistency with respect to the effects of medicines,—some practitioners extolling as invaluable the same remedy which others decry as completely useless.

In the practice of medicine also, various modes of treatment, have at different times, casually acquired a degree of celebrity to which subsequent experience proved that they had no pretensions. The serious injuries which must have resulted from such errors are sufficiently obvious. Either an inert practice was adopted, and the disease was suffered to pursue its course, unmitigated in violence by the interference of art, or active means were used, which improperly applied, contributed to exasperate the very symptoms that they were intended to remove.

To prevent these inconveniencies, and to afford to medicine sufficient consistency and method, the accurate report of such results as are connected with the effects of remedies, will be found perhaps, of all other means the best. It requires, however, considerable judgment and discrimination to decide as to the claim of any particular remedy to superior merit. Indeed, when numerous medicines are employed at the same time, it becomes almost impossible to determine precisely the extent of the influence which each has exerted. In all cases, therefore, where it is attainable, simplicity of practice is desirable, and should be adopted, were it only for the purpose of placing in a clearer point of view, the efficacy and value of the remedies that we prescribe.

It would seem that sufficient attention is not in general paid to these circumstances; a neglect which has, I am satisfied, contributed more to retard the improvement of medicine than almost any other cause. Medicine, is in truth an art so completely practical, that it must ever derive its chief support from facts accurately remarked, and faithfully detailed. But to the practitioner, instances of the successful employment of remedies are the most useful of all facts, since it is only from a perfect acquaintance with the powers of such remedies that he can select and apply them with advantage. To the practitioner, therefore, the history even of a salutary cure is of importance; for though in itself perhaps, of rare occurrence, it may, nevertheless, illustrate other diseases, or suggest reflections leading to more correct, or enlarged opinions.

The relation of recoveries, when evidently accomplished by particular remedies, has also another advantage; it must tend to confirm us in the possession of those improvements to which medicine has already attained, and thus give to its practice a steadiness, which will secure it most effectually against the mistakes and inaccurate reports of uninformed or interested practitioners.

It would, therefore, in a great degree promote

the advancement of medical knowledge, if we were more anxious to make public such practical observations as are either interesting in themselves, or can in any way contribute to confirm or correct the opinions of others. Communications having these objects principally in view, independently of their forming a valuable collection of facts, would, by the concurrent testimony of their several authors, satisfactorily establish many points, which, from the want of such evidence, are at present extremely doubtful.

These reflexions have occurred to me, in consequence of, I may say, the unexpected success which attended the employment of the use of bandages, in the following case of chronic inflammation of the joints.

Mrs. George Clarke, of Clarkeville, near Edenderry, in the King's county, aged about 35, of a spare habit, generally healthy, and mother of several children; nearly a year and a half ago, shortly after her last confinement, exposed herself to wet and cold, on an open car. She felt at the time no sensible inconvenience, but in the course

of a few weeks, experienced a loss of power in her feet and legs, attended with a sensation of numbness. This affection continued to increase, until at last she was unable to support herself; and sometimes on attempting to rise quickly from her seat, has fallen down altogether helpless. Her feet afterwards became excessively painful, the joints of the ancles and toes were much swelled, and she was obliged to confine herself entirely to her bed.

The most eminent practitioners in the country where she resided were applied to, and by them every remedy was ordered which seemed at all likely to afford relief. The warm bath, sudorifics of various kinds, refrigerative and stimulating medicines, peruvian bark in large quantities, local frictions, and stuping of the feet, all were in succession resorted to, but without the least advantage. Her complaint every day became worse, when as a last resource, frequent blisters were applied, and a constant irritation with a continual discharge kept up, for more than three weeks without intermission. But even this was unsuccessful. Under these circumstances, she was induced to come to Dublin, for the purpose of obtaining further advice, having, I believe, suffered under her disease for a period little short of twelve months.

When I first saw her, her condition was truly wretched. Her feet were both distorted, being permanently drawn inwards, and downwards, so as to hide completely each inner ancle, while the outer one was protruded considerably. The joints of the great toes were swelled and inflamed, the skin appearing smooth, polished, and of a bright red colour. The slightest touch produced the most exquisite pain, and the pressure even of the bed-clothes was intolerable. The only position in which she could enjoy an interval of ease, was while she sat with her legs drawn up, and supported by the upper and outer part of the feet. The pains she experienced were so severe, that she scarcely slept, and yet her appetite was good, and her general health in no respect impaired, with the exception of a slight numbness of the legs, arms, and fingers, indicating a tendency to paralysis.

As one of the first surgeons in the profession had, in consultation, pronounced her case to be hopeless, and recommended merely frictions of the feet with mustard, suggesting, at the same time, that issues might perhaps be made in the vicinity of the spine, of which, however, there was no distortion;—I will candidly confess I did not myself entertain any expectation that a cure could be accomplished. However, having met with the work of Doctor Balfour, who strong-

ly recommends the use of bandages in cases of gout and rheumatism, to the latter of which I conceived Mrs. Clarke's disease was closely allied; I thought them worth a trial, and accordingly desired that they might be applied.

The feet, previously to the application of the bandages, were rolled in soft wool, to preserve an equal and uniform pressure; they were also bathed at bed time in salt and water, which did not in any way interfere with the use of the bandages, as these were removed at night, and continued only during the day. In the course of about a week, a rapid and decided improvement was observed; the pains were greatly relieved, the swellings of the feet had diminished, the feet had become more straight, and their skin had in a great measure resumed its natural colour. In short, by a perseverance, solely in the means that I have mentioned, Mrs. Clarke has been restored to the use of both her feet, and I am informed, is now able to attend to her domestic occupations with as much activity as at any former period.

This case, such as I have concisely related it, strongly corroborates those published by Dr. Balfour in his very interesting work; and I have been principally induced to communicate it, as the remedy which accomplished the cure

admits of no doubt ; the evidence of the efficacy of bandaging being rendered still more decisive in consequence of the failure of all the various means which had been previously employed.

CASE OF

HYDROCEPHALIC FEVER,

BY

JOHN CRAMPTON, M D.

HONORARY FELLOW OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, PROFESSOR OF MATERIA MEDICA, AND ONE OF THE PHYSICIANS OF STEEVEN'S HOSPITAL, &c. &c.

Read May 5th, 1817.

That rare and uncommon diseasés should attract the attention of medical practitioners is by no means surprising; it is natural that such should excite a lively interest, and it is useful that they should be recorded. It is only in this way that we can collect the history of diseases of unusual character, investigate their pathology, or establish a reasonable mode of treating them.

It may be observed, however, that many diseases of daily occurrence, notwithstanding the

most diligent exertion on the part of an intelligent and experienced practitioner, will baffle his skill and refuse to give way to the ordinary modes of medical treatment. Those, therefore, who can suggest any improvement in the management of diseases, a considerable proportion of which prove fatal, either by the discovery of new remedies, or by a varied application of those in ordinary use, will deserve well of the profession and of the public.

It is in this point of view, that the mode of practice in fevers has been so much ameliorated, and that the mortality incidental to such diseases, has been so much diminished; and this has been done, not by the discovery of any new specific remedy, but by a scientific and better understood mode, in applying remedies, the medicinal powers of which have been long since appreciated.

These reflections have been suggested to me by the notes of an interesting case, which occured to me in September last, where there was every reason to apprehend a fatal termination by Hydrocephalic effusion, but where the disease was subdued by persevering in a very active line of practice. Aware of the difficulty that attends decisions in diseases of this character antecedent to death, I have given it the name of Hydrocephalic fever in preference to Hydrocephalus. The

symptoms were unusual in point of severity, and the sufferings of the patient scarcely to be exceeded. It had been my intention to have offered the history of the case sooner to this Association, but as a slight degree of mental derangement attended the convalescence, I waited the issue of this occurrence; all symptoms, however, of mental alienation have long since subsided, and the patient's convalescence has been followed by the complete recovery of his health, and the entire reestablishment of his understanding.

CASE.

Master F—— aged twelve, was observed during the first week in September, 1816, to be unusually chilly; his school-master attributed to idleness, his inability to attend his studies as usual, and made a complaint to his parents. On the 7th, he had distinct rigors, and complained of his head; his head-ache was augmented by driving five miles on a car, and spending the day in the country. He struggled with his complaint until the 10th, when he was obliged to go to bed.

On the 11th, calomel and salts were given him by his parents: on the 13th, calomel and scammony. On the 15th, his fever was increased, his pulse 130, and delirium had supervened; a blister was applied between the shoulders, and the powders repeated. On the 17th, emetic tartar was added to his powders; they operated both up and down, but afforded no relief to his head, and obtained no abatement of his fever.

This was the account of his illness which I procured from his parents, and from his medical attendant, my friend Mr. Connor, who being obliged to leave town, consigned him to my care on the 18th of September.

He had been eleven days ill; his skin was intensely hot, not much flushed; he was heavy and drowsy; his eyes prominent; light gave him considerable pain; the pupils were large and sluggish, and contracted but slowly with a strong light or a candle; his pulse about 100, not very regular, it changed its rate of frequency on the least exertion: pain in his forehead and back of the head so severe that he could scarcely bear it; he moaned constantly, and tossed his arms in every direction. On applying twenty three leeches to the temples, shaving the head, cooling it with ice, and obtaining a

few discharges from his bowels, he became cooler, his pulse at 88, but there was no mitigation to the pain in his head. In the night he was delirious; he screamed from intensity of pain in his head, shoulders and side; leeches were applied to his side on the 19th.—Towards mid-day there was a further increase of fever and of head-ache; the temporal artery was opened and suffered to bleed ad deliquium; pulse in the evening was 90 and softer, but as the head-ache was in no way relieved, ten leeches were applied to the temples, and an opiate directed.

He got some rest, but on the 20th, his head-ache was as severe as ever, pulse 120; face flushed; eyes suffused; pupils closely contracted; this latter symptom was attributed to the opium; the temporal artery was again opened this day, and suffered to bleed until he was faint; little or no impression was made on the head-ache; his cries and moans were constantly heard; tremors were likewise observed in the muscles of the mouth and the forehead.

On the 21st, after a quiet night procured by opium, twenty leeches were applied to the temples, and six ounces of blood were taken from the arm.

On the 22nd, pain of the head had, if pos-

sible, increased, and extended to the occiput and back of the neck; pulse 100; twelve ounces of blood were taken from the arm, with some temporary relief, after which he remained pale and exhausted, in a quiet stupor.

On the 23rd, after a quiet night from opium, says he feels some remission of pain; moans less; pulse 100, soft and regular; eyes look dim and suffused; pupils closely contracted.

24th.—He had another quiet night, pain now in the back of the head, and in the back; slight ptyalism from the mercurial medicines.

25th.—Has been in a warm bath at his own desire; head much relieved; pain now most urgent in the course of the spine, so severe as to oblige him to cry out; pulse 104, soft and regular; mouth sore.

26th.—An uneasy, delirious night; increase of pain in the back; eight leeches were applied to the back, and afterwards a blister.

27th.—Pain continues in the back.

28th.—Eight leeches were again applied.

29th.—Incessant moaning from the pain in

his back; head-ache has returned; pulse 104; stools have become natural coloured; ptyalism continues; six ounces of blood were taken from the arm, and a tranquil state procured by opium, after the action of a purgative.

30th.—Slept a good deal, and though he moans, complains less of pain; was again in the warm bath.

October 1*st.*—Some sleep; was delirious towards morning; pulse 112.

2*nd.*—Was agitated and restless in the night, the opiate having been omitted; is perfectly free from head-ache or pain in his back; pulse 90, and soft; pupils unusually large to day and sluggish;* opium with calomel again directed.

3*rd.*—Pupils less sluggish, pulse 100; an uneasy night.

4*th.*—Another distressing night; pulse 100; weak and somewhat irregular; complains much again of his head; is delirious even whilst awake, and under the influence of false perceptions; appetite returns.

* Whenever opium in this case was given, the pupils became closely contracted; whenever it was omitted, the pupils were dilated.

5*th*.—As yesterday.

6*th*.—Raves, and appears deranged, but takes food ravenously; pulse 90; skin cool; tongue clean; salivation continues; eyes look natural; does not complain of pain.

7*th*.—Ravenous appetite for food continues; food tranquilizes his agitation; delirium at night is appeased by opium given in divided doses.

8*th*.—Less irritable.

10*th*.—Handed him over to Mr. Connor, who kindly superintended his convalescence.

November 12*th*.—Is convalescent, but foolish and strange in his demeanour.

It is unnecessary to extend the reports of this case any further, than to say that the convalesence of this patient has been followed by complete recovery. There was for some time reason to apprehend a state of mental alienation, this appearance, was however only temporary.

As to the medical treatment, in addition to the detractions of blood, calomel was given to a considerable extent, throughout the whole period of the disease, sometimes it was combined with

Opium and Digitalis, and sometimes with James's powder; salivation was excited, cathartics, chiefly liquid preparations of Senna, and glysters were constantly administered. The excessive increase of temperature in the teguments of the head was kept cool, by the continued application of ice, whilst an equable degree of heat was maintained in the extremities by fomentations and the warm bath; Opium was freely used, sometimes in divided doses in combination with the other remedies, and occasionally in a fuller dose proportionate to the exigency of circumstances, and the frequency of pain.

The quantities of Calomel, Opium, Digitalis and James's powder given in this case, I have been induced to subjoin in the annexed table, with which Mr. Meredith, an eminent Apothecary of Earl Street, has been so obliging as to furnish me.

		CALOMEL GRS.	OPIUM GRS.	DIGITALIS GRS.	JS. POWDER GRS.
Sept.	15	8	0	0	0
	16	8	0	0	0
	18	20	0	0	0
	19	32	1	0	0
	20	18	1	3	0
	21	48	1	4	24
	22	20	1	4	16
	23	20	1	4	16
	24	20	1	4	16
	25	20	1	4	16
	26	12	1	0	8
	27	20	1	4	16
Oct.	2	20	1½	0	0
	3	20	1½	0	0
	5	20	1½	0	0
	6	—	1½	0	0
	7	8	0	0	0
	8	8	1½	0	0
	9	8	1½	0	0
	10	—	1½	0	0
	12	18	0	0	0
	13	6	0	0	0
	14	12	1½	0	0
	15	—	2	0	0
	16	12	2	0	0
	20	12	2	0	0
	23	12	0	0	0
total,		402	26	27	112

It has been well observed by Doctor Cheyne,* in his essay on Hydrocephalus, that many diseases of this character take their rise from a morbid con-

* Cheyne, second Essay on hydrocephalus.

dition of the liver and other viscera of the abdomen; in these views of the subject, he has been followed by Doctor Yeats,* and others. That this is the case in many instances, there is I am convinced, no doubt; but it is equally well ascertained by anatomical observations,† of which I could adduce many examples, that Hydrocephalus occurs from disease in the head, independent of any affection in the digestive organs.‡ It is right that we should be prepared to meet so formidable a disease in whatever quarter it may appear most urgent, and employ remedies which may act on the head, or on the liver, and digestive organs, according to the best view we can take of the individual case before us.

* Yeats on water on the Brain.

† In November 1814, a child æt. 8. that I attended, died of hydrocephalic effusion. The abdominal viscera were remarkably sound; the morbid appearances were confined to the brain and its membranes; all the ventricles contained a quantity of serous fluid. The dissection was performed by Doctor Macartney and Mr. Ashburner.

‡ Doctor Spurzheim, on whose accuracy in anatomical researches it is unnecessary for me to expatiate, in speaking of the proximate cause of Hydrocephalus, makes use of these words, "yet anatomical dissections have convinced me that "in the greater number of instances, the morbid appearances "in the abdomen are secondary symptoms of the affection of "the head."

SPURZHEIM on Insanity, P. 57.

Whether the case above recited was one of primary and idiopathic Hydrocephalus, or a disease symptomatic of a disordered state of the digestive organs, it is not easy to say with certainty. To form a decisive opinion on this subject, where recovery took place, is extremely difficult. This matter is the subject of doubt and difficulty every day in the practice of physic; indeed, it is only in those cases where the morbid appearance have been inspected after death, that we can be sure of the result. In the present instance, it may be observed, that the complaint began with a failure in the intellectual powers, rather than in those of the digestive organs; the pain in the head, and in the course of the spine, was too distinct and too severe to be attributed to the influence of morbid action in distant organs. The occurrence also of mental alienation on the subsidence of symptomatic fever, seems to confirm the idea that the head was the seat of primary and idiopathic disorder. At the same time it must be allowed, that a morbid state of the viscera of the abdomen has been occasionally known to be attended with mental derangement, and that even in many instances, no morbid appearances have been found after death, in the cerebral cavity, where mental alienation has existed antecedent to death.

As a matter of diagnosis, it may be desirable to determine, whether the head suffers primarily

from idiopathic disease, or whether the symptoms are the result of morbid action in some distant viscus; it may lead likewise to some variation in the application of our remedies; yet, as in both instances, the same destructive changes are known to follow, and the same ultimate termination by effusion into the ventricles is the consequence, it is a matter of more importance to ascertain if there are any general principles to direct us if there is any mode of treatment sufficiently energetic to arrest the progress of such disorders.

The name Hydrocephalus, indiscriminately attributed to acute diseases, affecting the cerebral organs, would seem to imply, that in every instance an effusion of fluid had actually taken place; such a nosological title appears to me as likely to lead in many instances to erroneous pathological views, as well as to considerable sources of mistake in the treatment. Practitioners acting on this impression, are apt to confine their efforts chiefly, if not altogether, to such remedies as promote the absorption of fluid. But as dropsy in other cavities, according to the ingenious observations of Doctor Blackall,* is often preceded by inflammatory symptoms; it is not improbable, that an inflammatory state of the membranes lining the cerebral cavities, or of the exhalants which

* Blackall on Dropsies.

open into the ventricles, may precede the effusion of fluid; and if this antecedent state can be observed by the practitioner sufficiently early, and treated as other acute inflammatory diseases, success may probably attend his efforts.

The favourable results which followed large and repeated detractions of blood in the case just recited, should it not encourage us to use bloodletting in conjunction with other powerful means of acting on the vascular and exhalant systems in acute diseases, which appear to effect the head? By depleting the vascular system, and diminishing the vis a tergo, the increased action in the capillary and exhalant systems, may very well be supposed to be diminished. I believe there is little doubt but that the exhalants are the source from which the ventricles are supplied with fluid in Hydrocephalus. The exhalants, according to Bichat,* are the terminations of the Capillaries or minute ramifications of the vascular system. If this excessive morbid action in the exhalants can be controlled, one step at least will be gained in our attempts to remove the disease; even though some slight effusion should have taken place, is it not possible, whilst the activity of the exhalants is diminished, that should the patient be able to bear the disease for a few days, and provided no disorganisation in

* Anatomie Generale, Tom. 2. p. 553.

the cerebral mass or membranes has occurred, that the absorbents may carry off the extravasated fluids from the ventricles, as they do from other cavities where dropsy has taken place? undoubtedly in addition to the oozing out of a fluid, if layers of coagulable lymph and adhesive adventitious membranes have been formed, as are often seen in morbid dissections of Hydrocephalic patients, no method of cure will probably succeed.

But bloodletting is not the only remedy which I propose should be resorted to in this distressing malady. I am disposed to recommend the use of Opium as employed by Doctor Cheyne, in conjunction with mercurials, especially after bleeding and the free use of cathartics. Opium,* in mitigating the sufferings of the patient, and in diminishing the morbid animal sensibility, promises to do much in saving the cerebral organs from the general destruction which awaits them, and if the patient does not recover under such treatment, his sufferings are invariably very much mitigated, nor will this opiate treatment be found to interfere with the action of purgatives in keeping up a properly regulated condition of the bowels.

The well known efficacy of Digitalis in Dropsies,

* The utility of Opiates in Hydrocephalus is strengthened by a case read by Doctor Brooke before the Association.

naturally led to its employment in Hydrocephalus, the use of it was suggested so long ago, as by Doctor Quin.* Its action is generally understood to be on the Renal and absorbent system and urinary organs. I have long considered that Digitalis exerts a strong controlling power on the exhalant system, as it often does on the vascular system; that its power in Dropsy consists as much in diminishing effusion, as in promoting absorption, and in establishing a free discharge of urine. In a Hydrocephalic patient, where I had Doctor Cheyne's assistance, a few days antecedent to death, digitalis† combined with Calomel and Opium surprised us both, and though the case was altogether given up as lost, it almost induced the relations of the patient to entertain some hopes of recovery.

I do not pretend to suggest any new remedy in the plan of cure I propose. I am anxious only that we should make an early and a more vigorous application of the remedies we already possess. Bleeding has been decried by many as a remedy not well adapted to children, and too much caution has been inculcated in the schools on this subject, which I am sure has done much mischief.

* Quin, on Hydrocephalus.

† Cheyne's second Essay on Hydrocephalus, page 47, where this case is related.

There is no class of patients, who bear detractions of blood in inflammatory complaints so well as children, or who so soon repair the loss; and there is no class of patients, where this invaluable remedy can be omitted with so much hazard in cases where it is required. In the case before us, it was often necessary to resort to bleeding a few hours after it had been determined in consultation* not to bleed, on account of the extreme urgency and violence in the symptoms, and their sudden augmentation; and though for some days this measure did little more than prevent the increase of the disorder, yet it seemed ultimately to subdue it.

Although I am convinced this patient's life was saved by pushing the detractions of blood as far as they could be borne, yet I am not disposed to undervalue the share the mercurials and purgatives were entitled to; we are all now sufficiently well impressed with the power which purgatives possess in depleting the vascular system, of course in controlling the morbid activity of the exhalants; and their general utility in febrile diseases is too well known, to render it necessary for me to enlarge on the subject.

The plan of cure then, which appears to me to deserve attention in Hydrocephalic fever, is

* I had the assistance of Mr. Richards and Doctor Mills, in the greatest part of my attendance on this case.

to take blood freely from the arm, from the arteries of the head, and by leeches at the temples, also from the side, where there is evidence of any disease in the liver; to give purgatives freely, to employ mercurials, with digitalis and other diuretics, to excite the healthy action of the liver, the mucous surfaces and the kidneys, to exert likewise that combined impression on the absorbent and exhalant systems to which I have already adverted, using opiates also to control that excessive feeling, and that morbid animal sensibility which adds so much to the distress of the patient, and which throws so many obstacles in our way in subduing so formidable a disease.

I have said nothing on the subject of blisters, or of the warm bath, which was used in this instance, as I am not attempting to give a complete view of hydrocephalic diseases, or a full account of the method of cure; a judicious practitioner will know when to resort to them with advantage; in many instances, however, blisters preclude the employment of ice, and other cold local applications to the head, from which so much more is to be attained for the patient, both as to present comfort, and eventual benefit.

CASE OF

ABSCESS IN THE LIVER.

BY

EDWARD GEOGHEGAN,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND, AND SURGEON TO THE DUBLIN GENERAL DISPENSARY,

(Communicated by Doctor Crampton.)

Read, March 3 d, 1817.

AWARE that the publication of cases not admitting of useful practical inferences, has rather encumbered than enriched the records of medicine, it is not without hesitation that I communicate the following.—I was consulted in October last, by a man of slender frame, 24 years of age, who stated that he laboured a fortnight under great pain in the region of the liver, that he had been blooded twice to the amount of 24 ounces, freely purged, and a blister applied and renewed three times without relief being procured. I dis-

covered a deep seated fluctuation; directed half a grain of calomel every night, and half an ounce of purging salts, every second morning; perceiving after a few days, that the fluid extended itself, and the distress encreased, I proposed giving exit to the contents, which was objected to; he was carried abroad, contrary to my directions, and an aggravation of his complaints followed: about this time he was examined by Doctor Crampton, who expected a fatal termination speedily; this encouraged me again to urge the operation, which was submitted to, and about six pounds of matter were discharged;* immediate relief succeeded, and gradual amendment apparently during twenty-three days, when diarrhæa commenced and proved fatal in a few days.

Observations.

As the evacuation of the fluid prevented sudden fatality, and produced favourable symptoms for a length of time, may we not presume, that when first proposed, success was reasonably to be expected? I witnessed a sudden fatal issue in a similar case, where no operation was performed.

* Bile was mixed with the matter, for several days after.

Having observed that matter had formed in several cases after the application of a blister often renewed, *pending fever*, particularly over the abdomen, also that furuncles of a large size were often produced by the emplastrum calidum, which remained on the part a length of time, I am disposed to believe that collections of matter are promoted by blisters used in this way. I have attended cases of painful and untractable sores consequent upon blisters having remained too long on the part, during a feverish state: as this practice is advised by men of intelligence, it is material to invite their further attention to it.

The great talents and research of Doctor Perceval of Manchester were profitably employed on the subject of blisters: he gives three instances from Baglivi; in one, six blisters were applied at once, and in the other four; death followed speedily in all, which he attributed to the number of blisters, and to their being ill-timed. Applications that excite so powerfully and suddenly, require a judicious adaptation to ensure their beneficial operation, I doubt that they are advisable in a plethoric state, or that they remain with advantage, long applied, *during fever;* whilst the necessity of evacuations previous to their use, is obvious, they appear to me contraindicated by a state of feebleness and irritability, also in external inflammation, circumstances, which I apprehend are not suffici-

ently considered—the remarks of Doctor Beddoes as to their debilitating effects, deserve to be held in recollection.

CASE

Of enormous distension of the Colon.

(By the same.)

About three years ago, I opened the abdomen of a female, who died in her fiftieth year; the external appearance, and feel, were like encysted dropsy; on exposing the cavity, a large globe presented, which I supposed to have been an hydatid, but not discovering the colon, I traced the canal. The stomach was not half the ordinary size, the small intestines were diminished in like manner: at the termination of the ileum, which was impervious, this globe commenced; it had no attachments; having separated it at the ileum and sphincter ani, I removed it into a bason of the largest size, which scarcely contained it: externally, it seemed almost inorganic in many points: the contents were about sixteen pounds of melæna, which the bye standers observed to be the same as the evacuations by stool had been for a length of time; the mesenteric glands, and almost every part the hands touched, had a tubercular feel: the liver was studded with tubercula conscripta, so well delineated by Dr. Farre, and was surprisingly diminished: it is entitled to consideration what share stricture of the rectum might have had in the disease; the state of the liver and other viscera shew that it must have been

an effect, however it might have became a cause of the aggravated state, and if early discovered and treated, the suffering of the patient would have been alleviated and life protracted. We are indebted to Mr. Copeland, an ingenious surgeon in London, for directing our attention so particularly to the importance and frequency of this complaint.

Dr. Sheridan and Mr. Justin Kearney were present at the examination of the body.

CASE OF

COMPLICATED DROPSY,

AND

DISSECTION,

WITH OBSERVATIONS,

BY

P. E. M^c^LOGHLIN, M.D.—M.R.I.A

FELLOW OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS, IN IRELAND, ONE OF THE PHYSICIANS TO THE WESTMORELAND LOCK HOSPITAL, LATE PHYSICIAN IN ORDINARY TO SIR PATRICK DUNN'S CLINICAL HOSPITAL, &c. &c.

Read Jan. 17th. 1817.

CASE.

March 21st, 1815.—Mary Clarke, æt. 54, complains much of oppression, fullness, and acute pain of the abdomen, increased by pressure. She coughs; and with difficulty expectorates; the cough causes her urine to come off in drops as she walks; she complains much of dysuria, and of a scalding sensation in the urethra. She vomits occasionally, and then perceives an uri-

nous taste in her mouth. She is subject as she says, to flatulence; and that the abdomen enlarges suddenly, but speedily subsides after an abundant discharge of wind upwards and downwards. She lies indifferently in any posture except on her back. The abdomen is now distended and tense; when struck, a sound is heard, and an indistinct fluctuation may be felt on first applying the hands, not afterwards.

The external labia pudendorum are, she says, sometimes much swoln; and she complains of great pain when the lower part of the abdomen is pressed upon. Her countenance is anxious. Pulse 112, small and feeble. Skin natural. Respiration laborious. Tongue white: no thirst. Appetite gone. Bowels very free.

On the 1st of January was exposed to cold and wet in her feet. She was seized with pain in the abdomen and swelling, which, commencing near the pubis, rapidly extended upwards, and in three days appeared larger than it is at present, attended with dysuria to a great degree. Has been subject to gravel and cholic. Has taken much jalap and cream of tartar, and other medicines with relief.

R. Calomelanôs grana tria
Pulv: scillæ grana duo
——Zingiberis granum.

Gelatinâ saponis ft. pil. duæ—St. j. statim, alteram post horas duas. fricetur abdomen leniter oleo olivarum per horam dimidiam bis in die.

22*nd*—Five small stools passed with some urine, much flatulence—The catheter was introduced after yesterday's visit, but little urine was drawn off. She complains chiefly of dysuria. Fluctuation is still very indistinct.

R. Unguenti hydrargyri—Unguenti simpl. aa. semidrachmam, M. Infricetur lateri dextro quāque nocte.

R. Pulv. cryst. tartari drachmam pulv. zingib. gr.ij. Sumul mane et vesperi.

23*rd*.—Urine said to be increased. Complains much of dyspnœa and flatulence.

R. Ætheris sulphurici semidrachmam.
Olei carui gutt. jj.
Sacchari drachmas duas
Aq. menth. uncias duas M. sumat ter in die.

Applicetur vesicat. inter scapulas. Rep. unguentum.

24*th*.—Has discharged much flatus. Fluctuation in the abdomen can be distinctly felt. Dyspnaea relieved. Pulse 90. Urine about a quart. Six stools. Abdomen softer than yesterday. Blister rose.

Repr. Pulv: cryst: tart.—Mist. Æth. sulphur. —et frictio.

25*th*.—Let her have tea morning and evening.

Scarce any variation occurred in the subsequent reports, until the 29th, when she complained of uneasiness in the abdomen, with vomiting, for which she was ordered to use the infusum menthæ.

30*th*.—Her mouth is affected, and some salivation has commenced. Nausea occurred during the night. She complains of this at present, and of pain in her jaws.

The vomiting was stopped by the use of the medicine. Abdomen softer than before. Much flatulence. Pulse frequent, but firm. Six stools. She complains of excoriation in the neighbourhood of the vagina.

Laventur partes affectæ aquâ calcis.

R. Pulv. crystal. tartari drachmam,
Aquæ libras duas
Spt. junip. comp. uncias duas. m.
utatur pro potû.

R. Aluminis drach. aquæ uncias sex: tinct: myrrhæ semunciam: M. utatur pro gargarismate.

Omittr. frictio cum unguento hydrargyri.

31*st.*—Three stools yesterday; urine about a pint and an half; abdomen much softer; flatulence greatly diminished; relief from the lime-water.

Repr.—Remedia. Fricetur abdomen oleo olivarum.

April 1*st.*—Urine about a pint and an half; no stool.

R. Pulv. scill. aridæ, Zingib. a gr. j. ft. pil. mane. meridie & vesperi sumenda. Repr. potus cryst. tart. et Frictio.

2nd.—Salivation continues. Abdomen tender. Bowels costive. Urine about one pound and a half.

R. Pulv. cryst. tart. unc. Pulv. jalapæ, drach. uas, syrupi zingib. q. s. fiat electuarium.—St.

partem quartam sextâ quaque horâ, usque dum alvus responderit.—Repr. Pil. Potus & Frictio.

3rd.—Mouth still very sore; no relief from the gargle; salivation considerable; abdomen feels very soft; urine about a quart; pulse 96; countenance cheerful; muscular strength considerable.

Tegantur fauces panno laneo.

R. Salis Boracis drachmas duas—Spt. vin. rect. semunciam—Aquæ uncias sex—Sacchari drachmam—M. Utat pro gargar.

Rept. Pilula, Potus acidus, et Frictio cum oleo olivar.

4th.—Some vomiting of green matter occurred in the morning; abdomen diminishes in size; six stools; soreness of mouth relieved; urine about a quart.

Omit. Pil. scillæ—Rept. Potus & Frictio c oleo.

From this period to the 10th, the symptoms varied little; the bowels were occasionally torpid, and the stomach irritable, which states yielded to the exhibition of the usual remedies.

10th—Soreness of mouth abated; urine about a quart; pulse 84.

R. Pulv. folior. digitalis luteæ gr. iss.
——Zingiberis gr. j. Fiat pilula, mane, me-

ridie, et vesperi sumenda; nisi vomitus supervenerit.
Omittr. reliqua.

Fricentur fauces externæ Oleo ammoniato.

11*th*.—Some nausea from the pills; salivation increased; pulse 84; urine one pound and a half; B. costive.

R. Pluv. cryst. tart. drachmam, Jalapæ scrupulum. M. St. Statim. Repr. Pilula.

12*th*.—Physic operated very frequently, and produced vomiting.

13*th*.—Vomiting succeeded a fit of coughing last night. This has occasionally prevailed for some time past; urine about a quart; abdomen diminished in size; mouth much easier; some salivation continues; B. costive.

St. Sulph. magnes. drach. sex, ex aquâ menthæ.

From this period, the state of the stomach and bowels were the principal objects which demanded any variation in the general line of treatment. She was occasionally ordered some saline purgatives, in combination with carbonate of soda, taken with lemon-juice, a form suited to the delicate state of stomach under which she continued to labour. This with the Pil. myrrhæ compositæ, and the Pil. aloes, c. myrrhâ, were the remedies chiefly employed, till the

26th; very little salivation now remains; mouth not at all sore; abdomen still considerably distended, with a very distinct fluctuation. Bowels and urine nearly natural.

R. Pulv. cryst. tart. drachmam.
——Zingib. gr. jj. m. St. mane et vesperi.

30*th*.—Much swelling, and distinct fluctuation remain; bowels free.

R. Pulv. fol. digitalis gr. iss.
——— Scillæ gr. j.
——— Zingib. gr. j. M.
Fiat Pilula, mane, meridie & vesperi sumenda.
Repr. Cryst. tartari.

Remit to the Physician in ordinary.

May 1*st*.—Is costive.

St. Pulveris jalapæ,
Submuriatis hydrargyri sublimati,
Utriusque grana quinque, boli formâ.

2*nd*.—Medicine operated five times; her breath-is much relieved; urine somewhat increased to about one quart.

Pergat in usû pilularum.

3*rd*.—Urine is again diminished to lb i; breath-

ing very much oppressed, and the abdomen is remarkably tense; no thirst; pulse weak; no stool within the last twenty-four hours.

Repetatur submurias hydragyri sublimatum, cum radice jalapæ, ut nudiustertius præscriptum est.

4*th*.—Four stools; quantity of urine not increased; feels herself much lighter; pulse rather fuller than yesterday.

St. vesperi, Pulv. radicis scillæ, gr. iv Calomelanôs, gr. ii. Hab. vini uncias quatuor.

6*th*.—Two quarts of urine passed since last report.

Repr. Medicamenta.

7*th*.—Bowels costive; urine about a quart.

St. Calomelanôs, Jalapæ aā gr. V. Repr. vinum.

8*th*.—Had five motions from the bolus; a considerable discharge of urine took place through the night; feels herself much relieved to-day.

Sumat calomelanôs grana duo, cum Pilularum scillæ granis quinque, formâ pilulari.

9*th*.—Two quarts of water passed since last report; no passage by the bowels; feels herself lighter; the fluctuation is still distinct.

Repetatur Bolus ex radice jalapæ, ut ultimò præscriptum est.

10*th*.—Eximatur Aqua ex cavo abdominis paracentesi.

11*th*.—Twelve quarts and a pint of fluid were drawn off by the operation, which coagulates by heat, and all the reagents. On examining the state of the abdomen now, a considerable enlargement as well as induration of the left ovarium* is perceptible. The tumor is impatient of touch. Last night and this morning she has passed two pounds of urine. Two stools.

Habeat Vini rubri uncias octo.

12*th*.—Two quarts of water passed since yesterday, high coloured, but not turbid. No sensible increase of the abdomen. She complains of tenderness in the tumour reported yesterday. No thirst; œdema of the lower extremities gone. No stool since last report. She is affected with ptyalism.

* This however, afterwards turned out to have been the uterus itself which had been pushed out of its natural situation.—See the report of the dissection.

Sumat statim.

Pulveris jalapæ compositi grana quindecim: et repetat vesperi, ni interea soluta fuerit alvus. Horâ somni Sumat pulveris foliorum digitalis granum cum semisse, formâ pilulæ.

Contr. Vinum.

13*th*.—Four lb. of urine passed since last report. Several loose motions from the powder. Ptyalism severe. The abdominal swelling begins to return. Tongue moist and clean. Pulse soft, slow, and regular. Complains of great weakness.

Contr. Vinum.

Let her have strong broth.

15*th*.—Four lb. of urine within the last 24 hours, and four stools. Complains of headache. Ptyalism yet continues. Pulse feeble.

Contr omnia.

16*th*.—Urine as last. Five stools. Tongue clean. Ptyalism diminished. Pulse stronger.

Perstet.

17*th*.—About 2 lb. of urine since yesterday. Four stools. She feels herself better to day, and can now bear a more than slight pressure on the tumour mentioned in the report of Thursday last, (the 11th.)

R. Calcis hydrargyri. albæ gr. xv.
Linimenti simplicis scrup. M.

Infricetur hypochondrio sinistro vesperi.
Contr. Pilulæ et Vinum.

18*th*.—Symptoms as before.

Contr. omnia,

19th.—She has passed two quarts of water, with four motions in the last twenty-four hours. A considerable discharge of flatus also has taken place. She complained much of cramps during the night. Abdominal swelling has increased. Pulse regular. No thirst.

Omittatur Digitalis.

R. Misturæ camphoratæ uncias quatuor—Liquoris ætheris oleosi drachmas duas—M. Sumat semunciam tertiis horis.

20*th*.—Nearly 3 lb. of urine; three stools; she says she has experienced great relief from the

spasms, and also from the flatus, by the medicine of yesterday; tongue quite clean; pulse slow and weak.

Contr. vinum ad uncias octo, et mistura.

23*rd*. The urine continues at the same standard quantity as latterly reported. She had several loose motions from a purgative bolus, which was given yesterday; she vomited this morning. The tumour reported on the 11th of this month, on examination, appears to have extended considerably through the left iliac region; countenance pale; heat of the body diminished; pulse weak, and she complains of great langour; tongue clean; no thirst; appetite deficient; mouth slightly affected by the medicine.

Contr. Vinum, Mistura, et Frictio.—To have broiled mutton.

24*th*.—At about nine o'clock this morning, she felt a sudden desire to go to stool, where she passed a considerable quantity of flatus, which was immediately succeeded by a discharge of purulent matter, resembling the contents of an abscess mixed with blood, and amounting to about four or five ounces; since which she says she has felt considerably relieved and lightened.

Foveatur abdomen—Cont. Vinum & Frictio.

25*th*.—Urine 2 lb; one stool; size of the abdomen considerably diminished; countenance improved; tongue clean; pulse natural. Says she feels her strength returning.

Contr. omnia.

26*th*.—Still some tension of the abdomen; size as yesterday; 2 lb. of urine, and four stools since last report; general health and strength appear improved.

Perstet.

27*th*.—30*th*.—No change.

31st.—Urine diminished; one stool since yesterday.

Contr. medicamenta. Repetatur pilula ex digitali.

June 1*st*.—2 lb. of urine; one stool; tension of the abdomen still continues.

Contr. pilula et cætera.

From this period no remarkable change, either of symptoms, or treatment occurred, till the 22nd, except that there was occasionally a purulent appearance in the urine, the quantity of which varied from two to three pints in the twenty-four hours; the stomach and bowels at times affected as before reported.

22*nd*.—Size of the abdomen is considerable, with great tension; the urine, not exceeding lb. i. in twenty-four hours, is passed with very great difficulty; alvine excretion, procurable only by means of the electuary; pulse soft, somewhat fuller than for many days past; tongue moist; she has had some thirst these two days, with occasional rigors, to a very slight degree however.

Repr. Abdominis paracentesis.—Contr. Vinum et Electuarium ut antea.

24*th*.—The operation was not performed, the surgeon having been apprehensive of the patient's sinking through debility; symptoms as last.

25*th*.—The surgeon is requested to perform the operation.

27*th*.—Operation was performed, and fourteen quarts of fluid were drawn off; *no deliquium* succeeded the operation.

Contr. Vinum.

28*th*.—Feels much relieved. There is again perceptible in the region of the left ovarium,* a circumscribed hard tumour, impatient of pressure.

* Vide report of the 11th May, when this tumour was first noticed.

Tongue clean; pulse much improved in strength; some thirst. She has passed 2 lb. of urine in twenty-four hours; bowels regular.

Repetatur Frictio cum linimento, ut die decimo septimo mensis ultimi præscriptum est.

July 3rd.—Appearance of the urine turbid; its quantity amounts to upwards of 2 lb. in the twenty-four hours; three stools; strength not much impaired.

Perstet.

4th.—Urine scarcely amounts to 2 lb. It is high coloured, turbid and depositing a considerable quantity of purulent-like sediment. The upper strata of the specimen preserved, which was passed last night, exhibit a strongly marked bilious tinge, and on inspecting the linen, it is found to be deeply stained, as occurs in jaundice.

The bowels were freed twice yesterday evening, and once this morning. The countenance is very much improved. There appears less langour; and she thinks her general strength is increased. Pulse more full. No thirst; nor sense of oppression.

Continuantur omnia.

5th.—Urine one quart, of an appearance similar to that of yesterday; three motions; she complains

of a sense of weight and pain in the hypogastric region, and also of flatus to an oppressive degree.

R.—Spiritus pimentæ drachmas duas,
Aquæ menthæ piperitæ uncias duas.
Aquæ puræ unciam,
Tincturæ opii guttas tres.
Sacchari duri scrupulum. M.

Ft. haustus statim sumendus, et pro re natâ repetendus, urgente flatû.

7th.—A considerable expulsion of flatus *per anum* has taken place, since she commenced the use of the draughts last ordered, from which she says she has experienced great relief. The abdomen is now hard, but at times flaccid. The appearance of the countenance is much improved; pulse full; tongue perfectly clean; no thirst; bowels regular.

Cont. omnia.

Flatus continued to be discharged, with much relief; and though the size of the abdomen varied frequently, its tension remained unabated; the purulent appearance in the urine was still observed; its quantity as before; less torpor of the bowels in general than hitherto. On the 12th, she complained of cardialgia and vomiting, for which the following mixture was ordered:

R.—Magnesiæ drachmam,
Aquæ menthæ piperitæ uncias sex,
Tincturæ opii drachmam,
Sacchari. quan. suff. M.
Sumat unciam semis redeunte vomitû.

13*th*.—The mixture was vomited. She however slept well. There is an increase of the purulent deposit in the urine.

Sumat cochleare minimum misturæ tantùm pro dosi.

16*th*.—The urine cannot be retained. The abdomen is again remarkably distended, tense, and hard in the left hypochondre. The salivation has much increased; the pulse scarcely perceptible; tongue still clean and moist.

Contr. vinum.

17*th*.—She has great difficulty in passing water. The swelling and tension of the abdomen continue; pulse thready and weak; tongue clean; one scanty motion; salivation continues.

Contr. vinum.—Foveatur abdomen.
Exploretur vesica urinaria catheteris ope.

18*th* and 19*th*.—Scarce any urine procured by the introduction of the catheter; it still passes

guttatim, and with ardor. There is in the countenance great expression of languor; tongue discoloured; pulse very weak; skin cold; one stool; abdomen still tense and tumid.

Contr. vinum.

20*th*.—Symptoms as described in the report of yesterday, but that the respiration is more affected. Pulsus vix sentiendi.

Contr. vinum.

21*st*.—She has remained since yesterday in a state of extreme languor. Pulsus ut heri. The entire body, as well as the extremities, now cold. The respiration is much impeded, and only performed by broken sighs. But one scanty stool. Abdomen fallen a little.

R.—Injiciatur enema, ex
Decocti communis pro enemate unciis duodecim
Vini-aloes unciâ
Spiritûs terebinthinæ drachmis tribus
statim.———Contr. vinum.
Applicentur sinapismata acria pedûm plantis.

22*nd*.—Languor excessive; coldness of the body still continues; arms are spotted with livid patches. Respiration very slow. Pulsus nusquam sentiendi. Yet she remains perfectly sensible: she swallows with ease; and, notwithstanding the extraordinary languor which prevails, her voice is

strong and her articulation distinct. The feet are swelled and discoloured; the abdomen rather more flaccid than yesterday.

Two injections were given, the first of which was retained; the second produced one motion with some urine. This morning she had one scanty stool quite fluid.

Repr. Vinum.—Repr. quoque Enema.

23rd.—She remains perfectly sensible. Her voice is strong, her hearing acute.—Arteriarum pulsus ex toto deficiunt. Facies magis extenuatur. Livescunt partes extremæ cum frigiditate et duritie. Friget totum corpus. Spiritus rarus, inæqualis, magnus per intervallum.

25th.—Obiit.

EXAMINATION OF THE BODY.

On opening the ABDOMINAL CAVITY, the aqueous contents of which amounted to about sixteen quarts,* the INTESTINES appeared possessed of an unusual degree of vascularity, and were studded thickly, through the whole extent of their surface with small tubercular and fleshy excrescences of different magnitude, from that of a large pea, to the size of millet seed.

The STOMACH and the whole INTESTINAL TUBE, but particularly the colon, in its great transverse arch, were remarkably contracted; and from the last sigmoid flexure of the colon, through the course of the rectum, the canal was nearly obliterated: the latter portions of this last gut, between its passage under the neck of the uterus and the anal orifice, were remarkably schirrous; the sides of the tube being very much thickened, whilst its lumen did not exceed that of a goose-quill.—Throughout the whole alimentary canal, it had formed strong,

* The fluid, in colour resembled the serum of blood, but was somewhat more viscid.

but interrupted adhesions, with the parietes of the abdomen; the peritonæal coats being separate only at the anterior part of the cavity, where the effused fluid before mentioned, had been lodged.

The OMENTUM was remarkably thickened, particularly at its connexion with the colon; and presented also a tuberculate and discoloured appearance, like lumps of old cheese. The same was also observable in various parts of the MESENTERY.

The LIVER, the size of which was uncommonly small, (not exceeding that of an ox's kidney,) and the substance remarkably hard, firm and tubercular, adhered closely throughout the entire upper surface of its left lobe, which was the larger, to the peritonæal covering of the diaphragm; to which, also, the posterior and upper surface of the right lobe was firmly attached: the adhæsions of both were so strong, as not to be separable, without a laceration of the capsule of the liver.

The GALL-BLADDER, notwithstanding this tubercular state of the liver, was found to be of the natural size, distended with *well coloured, healthy looking bile*, and of the usual elliptic form, but the passage through its duct was so minute, as to refuse admittance to a very fine probe, and was discoverable only by means of a blow-pipe. The

appearance of the *lobulus Spigelii* was rather that of a protuberance, or protruded part, being quite undefined in its connexion with the general substance of the liver.——The weight of the whole viscus amounted to one pound, six ounces, three drachms.

The PANCREAS was not more than one-third of its usual dimensions.

The SPLEEN was of a leaden colour, but of so contracted a size, and of so uncommon a form, (wanting entirely the serrated edge), as, at first, to be readily mistaken for a small kidney.—The VASA BREVIA were of remarkably small diameter.

The KIDNEYS presented no unusual appearance, being perfectly sound in structure, except that to the lower extremity of the left kidney, a distinct *hydatid* was attached: it was not enclosed in a cyst; its coats were thin and transparent.

The BLADDER was closely connected at its anterior surface, as far as its fundus, with the symphysis pubis, and adhered firmly, through the entire of its posterior surface, to the uterus. Its *cavity* was so small that it could not contain more than two ounces, yet were its *coats* not thicker than ordinary.—The URETERS were as small as threads, and became evanescent in the adhæsions.

The UTERUS was enlarged to a diameter of about four inches; it was spherical above, at its fundus, resembling a cricket-ball, but descended suddenly with a pyriform or conical neck, to its connexion with the vagina; in feel it resembled the firmness of cartilage.

The *right* OVARIUM did not much exceed the natural size, but the *left* was distended to such an enormous degree, as to fill the intire cavity of the pelvis, even to the compression of a tube so small as the intestinal canal, where it enters that cavity, has already been represented to have been found. The *ligamenta lata*, were much thickened, almost cartilaginous.

Two ligatures were now passed round the rectum, near each other, just at the commencement of the gut, and the gut having been divided between the ligatures, the symphysis pubis was cut through, and the whole of the uterine appendages, with the bladder, rectum, &c. were removed, the incision being carried at some distance round and under the verge of the anus. The parts being thus removed from the body, and separately examined, the appearances were as follows:

Having carefully dissected the posterior surface of the BLADDER, from the anterior surface of the UTERUS and VAGINA to which it adhæred, from the

fundus downwards, till I came to within about one inch from the orifice of the urethra, I introduced a female catheter, per vaginam, until the point was distinctly felt through the coats of the vagina, beyond that limit, to which the dissection of those adhering surfaces had been carried: at this place, an incision was made on the catheter, in the direction of the axis of the vagina, and, a director being introduced from without, the incision was carried on to the uterine termination of the vagina, the cavity of which was thus laid open to view. No appearanceof the rima or os tincæ was discoverable in the usual situation, but, after much search, a minute hole was found, a little to the right side, into which a small probe being introduced, it passed obliquely downwards, a very little way. The probe was now withdrawn, and having been bent, was again introduced, and turned so, as that its *point* pressed against the anterior wall of the cavity: here an incision was made, which, being cautiously extended, discovered a cavity not exceeding the capacity of the bowl of a desert spoon, which was filled with a soft, liver-coloured substance, enclosed in a very fine capsule. On cutting into this capsule, which in tenuity resembled the pia mater, a substance like the cineritious portion of brain protruded.

The cavity being now cleared, the remaining part of the uterus was cut into, from before backwards,

by a longitudinal incision: its substance was of a form nearly spherical, and was covered with a coat about as thick as strong shoe-leather, which was dissected off a little way to the right and left of the incision: the knife was then carried in a meridional plane through the center of the tumour, which was found of a tough cartilaginous consistence, intersected variously, here and there, with slips of condensed cellular substance, like shreds of parchment, not unlike what are often observed in the dissection of cancerous mammæ. It was remarkable that the cavity of the uterus was not bounded by a concave surface behind, its posterior wall being flat, approaching to convexity: indeed, were I to select a simile by which to illustrate the form of this cavity, as well as its relative magnitude, compared with the remaining and solid part of the uterus, I know of none so apt as the anterior chamber of the aqueous humour of the human eye; the plane of the iris, representing the hinder boundary of the cavity, and the cornea the anterior; whilst that portion of the globe, situate behind the plane of the iris, would afford a sufficiently accurate representation both of the figure and ratio of the solid parts.

The OVARIA adhæred to the back part of this uterine tumonr; the *right Fallopian tube*, was distinct, adherent and incurvated; the *left* was nearly obliterated.

The right ovarium, as has been already said, was but little enlarged: it contained two small hydatids, with less than half an ounce of purulent matter.

The left ovarium contained about three pints of a soapy albuminous fluid, with which a considerable quantity of curdy purulent matter was mixed. The cavity of this ovarium, being evacuated and laid open, discovered, adhering to the lower part, several hydatids of different sizes, one in particular more than an inch in diameter, which, on being punctured, *projected* a quantity of green coloured fluid: I use the term "projected" to convey an idea of activity in the part, as pressure was cautiously avoided, and the puncture was exceedingly minute, through which the fluid instantly spirted out.

The left ovarium having descended by its great weight, gave a quarter turn to the whole uterine mass, round an axis parallel to that of the vagina, and had thus, as it were, changed place with the uterus, turning it over to the left side,* as much as the adhesion of the latter viscus with the bladder would permit: the fundus of the bladder, the uterus, and the right ovarium, being all pushed

* See Case; Reports of 11th May, and of 28th June.

up into the cavity of the abdomen, whilst that of the pelvis was totally occupied by the left ovarium.

*** There was not any adhesion of the colon to the liver, nor of the rectum to the ovarium, either, or both of which appearances, the previous history of the case would naturally lead us to expect. *

Observations.

The history of this case presents to our observation, several curious, as well as interesting facts: and however we may be disposed to wonder at so multiplied and almost unexampled a deviation from the sound and ordinary structure; our surprise is no less excited how life should have so long continued under such adverse and extraordinary circumstances, or indeed, how the exercise of almost any of the functions could have been compatible with such derangement of organization.—For though some of the appearances were such as might have arisen from the occasional causes adverted to in the history of the case; we can

* A preparation of the Uterus, Bladder, &c. is deposited in the Anatomical collection of Doctor Macartney, professor of Anatomy, Trin. Coll. Dublin.

hardly suppose that a few months, or even years of diseased action, could have produced several of the morbid changes of structure discovered on dissection.

Thus, we may refer the diseased condition of the uterus, its adhesion to the bladder, the abscesses, hydatids and dropsy of the ovaria, the adhesions of these again with the diseased uterus, fallopian tubes, and other neighbouring parts, to inflammation, such being known to be the usual consequences of that process occurring in various viscera. With this, however, we must rest satisfied, without attempting to explain it, regarding it as it were a primary fact, of which nature has given us the use, but not the theory, and which, as a general law, we are to consider, not in respect to its origin, but in respect to its application and consequences.—So far, observation and analogy will assist us.—But how shall we attempt to reconcile appearances at once incongruous and unsupported by the evidence of any former history?—How shall we account for the reduction of the capacity of the urinary bladder, while its coats were not thicker than they are found to be in the natural state? How far the diminished and unorganized state, in which the liver was found, whilst the gall-bladder, with its

contents, seemed scarcely altered from the *natural condition? To what shall we ascribe the contracted state of the spleen, little larger than a human testicle?—the extraordinary contraction of the whole alimentary† canal, the stomach itself being incapable of holding more than three or four ounces?—the diseased Pancreas, Omentum, Mesentery?—in short, the deranged structure of the whole of the abdominal viscera§, if we except the right kidney?

Can we suppose that the diseased actions, of which these were the results, were of recent oc-

* Vide Note §.

† In the Acta phys. medica, a case is recorded of contracted duodenum with displaced stomach, which was found removed from its natural situation, occupying the left hypochondre, and stretching from the diaphragm to the pubis: but there the other viscera were all sound. Vid. Act. ph. med. Acad. Cæsareæ Leop. C. Norimb. V. 10th p. 233.

§ For though the gall-bladder, with its contents, appeared natural, yet its duct was tortuous and almost obliterated; and the left kidney had already assumed a diseased condition: this accords with the observations of the earliest ages, from which it would appear that the kidney of the left side is more frequently the seat of disease than its fellow of the opposite side, owing perhaps to the greater length of its emulgent vein.—Vide Morgagni Epistolas. Vide quoque tractatum de homine dextro & sinistro. Auct. Meinard Symon.—Schlegel's Thesaurus.

currence, or, what is more probable, must we refer them to original malconformation. Yet here we meet with new obstacles. We are at a loss to reconcile the phænomena of life, with a mechanism apparently so inadequate to the design.

Perplexing then, as this case must appear, in a physiological point of view, the contemplation of its peculiarities will, however, afford no small satisfaction to the Pathologist, who may here account, by morbid appearances, for symptoms, which, without this aid, might remain involved in no small degree of obscurity, but which here meet a ready explanation from the structure discovered upon dissection. Thus the *urinous taste* in vomiting, would seem to have depended on the circumstance of the difficulty, which nature had placed in the way of the regular transmission of the fluid secreted by the kidneys, towards the natural outlet, the ordinary passages being either totally denied, or unnaturally minute; whilst, from the apparently healthy structure of the kidneys, there was every reason to conclude, that the secretion of the urine itself had suffered no diminution whatever.—Accordingly, we frequently find by the reports, that large quantities of water were passed in the 24 hours, at different periods of the disease, though she mostly complained of dysuria attended with ardor, and the

introduction of the catheter, procured scarce any discharge.*

The phænomenon in question, then, most probably originated in the removal of the fluid so detained, by absorption, a process, to which Nature frequently resorts, when urged by the stimulus of necessity, and one which we know to be greatly promoted by the operation of vomiting; the renal plexus thus carrying off the fluid already secreted, whilst, by an inverted action of those lymphatics in the neighbourhood of the coronary vein, and gastric artery, the fluid was in part discharged into the cavity of the stomach and duodenum, not unlike to what probably happens in some cases of diabetes, but that here, namely in the case before us, we have an especial cause to determine the motion of the fluid in this inverted direction; the operation, to wit, of certain forces obeying well known physical laws, in order to preserve an equilibrium of pressure, which, in the act of vomiting, had been taken off from the mouths of those lymphatics, and the readiest and simplest mode of restoring which would evidently be the return of the fluid from the thoracic duct, thus causing a temporary inversion of lymphatic action or motion.

* Vide Reports of 22nd March, and 18 and 19th July.

I have already stated, that large quantities of water had been passed in the 24 hours at different periods*, yet no direct passage from the kidneys to the bladder was discoverable, the cavity of the ureters being obliterated in the adhesions formed between that reservoir and the uterus. Is not this a case analagous to some we read of, where, either by an inversion of lymphatic action, or perhaps by mechanical percolation, fluids have been directly conveyed from the intestines or the stomach into this receptacle, without traversing the ordinary course of arterial circulation? Baron Haller gives the history of an experiment by Kratzenstein, who tied ligatures on the ureters of a dog, and then emptied the bladder by a catheter; in three hours, the dog having drank greedily, a considerable quantity of urine was passed.† Two similar experiments with the same result, are related in the Phil. Trans. No. 65, p. 2083, anno 1670, and No. 67, p. 2049, for the year 1671.—and cases are recorded of the urine continuing to pass after the total destruction of the kidneys by suppuration.

Doctor Darwin relates an experiment made by a gentlemen who drank a quantity of fluid, in which nitrate of potash had been dissolved;

* Vide case. Reports of 6th, 8th, 9th, 12th, 13th, 15th, 16th, 19th, and 23rd of May.

† Disputat. ad morbor. historias, &c. T. 4. p. 63.

pieces of soft bibulous paper, moistened with the urine passed soon after, and dried, shewed the presence of the salt, whilst none could be detected in the serum of blood drawn from the arm immediately after the discharge of the urine so tainted.* A similar experiment is also mentioned in a letter from Mr. C. Darwin, where some asparagus was eaten at the beginning of intoxication; its smell was perceived in the urine, though not in the blood.†

That the medium of the ordinary course of

* Zoonomia. Sect. 29.

† A case is related of a young lady who had been attacked with severe fever, in which the head was remarkably affected. She had violent delirium with suppression of urine, for several days; it now became necessary to empty the bladder by means of a catheter, which operation was obliged to be performed for many days successively. On the 7th day, Bachetonus, the physician attending, observed a quantity of oil discharged with the urine, and on inquiry found that the patient had taken 4 ounces of oil of sweet almonds the day before. That this was the oil which appeared in the urine he did not doubt, nor did he wonder at it, but could not well reconcile how it should appear "citra "mutationem."—The commentator goes on to observe, that instances of the kind, *though frequent*, were surprising, and adds, "ac nisi breviores, rectioresque vias Anatomici excogi- "tent, quibus certa humores in vesicam deducantur (quis vias "Bachetonus non audet proponere), mirari nunquam desi- "nent." Anno Dom. 1745.—Vid. Acad. Bononiensis Comment. Tom 2, part, 1. p. 219.

circulation, is not necessary to the formation, (to use the less exceptionable term,) of the urine in the kidney at least, we have abundant proof in the experiments lately instituted by Sir Everard Home, and detailed in his very ingenious paper on the uses and structure of the spleen*—from these it appears, that various fluids, which had been injected into the stomachs of different animals, in which the pylorus had been previously tied, found a ready passage into the circulation by means of the spleen, the substance of which, as well as that of the kidneys, exhibited unequivocal proofs of the presence of the several substances held in suspension or solution by the various fluids so injected, whilst the Liver betrayed no signs of such impregnation, though tested with the most delicate reagents.

Here then, the route could not have been by the absorbents through the Thoracic duct, &c. but appears to have been by the splenic vein, whose diameter seems well adapted to such a purpose.

To return—Let us examine the analogy between those examples, and the case more immediately under our consideration.

From some of those, we learn that the kidney

* Vide Philosoph. Transactions.

itself is not necessary in order to the secretion or separation of urine from the blood; we therefore are the less surprised at finding the bladder filled with urine, though the ureters had been tied up, as in the experiments recorded by Kratzenstein, and those related in the philosophical transactions for the years 70 and 71.*—Again we find that the usual passage of the circulation, is, at least not an essential preparatory step to the separation of this fluid even from the ingesta, as in the cases related by Doctor and Mr. Charles Darwin, the urine exhibiting in the one case, the chemical, in the other, the odorous properties of the different fluids swallowed, whilst the blood was free from any such taint. All we can collect, from the experiments of Sir E. Home on this subject, is, that some viscera, more than others, are in, as it were, a chain of correspondence with each other, and but partially concerned with the general circulation; as appears by his being able to detect the presence of colouring matter (injected into the stomach,) in the spleen, the splenic vein, and the pelvis of the kidney, though not in the arteries—nay in one of them, this sort of cross-road takes a direction counter to the circulation, as in the passage from the splenic vein to the emulgent. Be this, however, as it may, we have incontestable proof, that

* See also p. 231, line 3 of these Observations.

arterial circulation is not the necessary preface to the production of the fluid in question.

In the case before us, we have several main obstacles to encounter, scarce any spleen, and this quite unorganised, and though I cannot, even from recollection, state the absolute want of the splenic vein, yet I think it will be allowed that, with such a spleen, it is probable it was in a state of collapse, at least there seems to have been very little use for it. It is much to be regretted, that the vein was not injected, which would save the necessity of any conjecture on the subject. The kidneys were sound, at least in their internal structure, or that portion where the secretion of what is termed concocted urine is performed; still there was no direct passage from their pelves, the ureters being obliterated; notwithstanding which analagous to what is related in Kratzenstein's experiments, urine was found in the bladder. Could the ureters have acted, not as tubes, but as conducting rods, giving a direction to the fluid falling from the kidneys towards the bladder, the urine having sweated out at the pelvis of the kidney, and trickled down upon the surface of the ureter? Yet here is an unnecessary nicety; it must fall, but when it arrives at the bladder, how does it enter? we are again driven to porosity or percolation, to probability and analogy.

The indifference of posture, a thing so uncommon in cases of ascites, admits of an easy explanation

from the shrunk and dwindled state in which the abdominal viscera were found;* incapable therefore, of causing any distress, from their pressure† on the sentient parts: she found, however, some difficulty in lying on the back, from the general pressure of the effused fluid on the diaphragm impeding its free descent in respiration.

Discharges of purulent matter per anum occurred at different periods of the disease, and yet no adhesion was discoverable between the ovarium, which contained a considerable quantity of pus, and the rectum; nor was there any appearance of ulceration in the gut. This would at first appear extraordinary, though we have authentic histotories of cases, where the urine had been for a considerable period of time discharged per anum, and where, notwithstanding, there was not the smallest communication discoverable between the bladder and the rectum on the examination of

* The only instance I remember to have ever seen recorded of præternatural diminution of the stomach and whole alimentary canal, is to be found in the Acta Physico-Medica, Norimbergæ, V. 10. p. 126; there however, the other viscera were sound and of the natural size.—In the Ed. Med. and Surg. Journal, is a case of contracted stomach, but there the coats were thickened in a very extraordinary degree.—V. 2. p. 415.

† The pressure became still further lessened by the general adhesions which had taken place.

the body after death. The appearances which gave rise to the opinion of discharges of matter per anum, may however, be accounted for in another way, by supposing that the matter fell from the uterus, along the passage of the vagina, in the act of straining, while passing the fæces. To the same cause would I be inclined to attribute the appearance of the urine noticed in the latter periods of the disease.*

It may be proper in this place, to notice some particulars deserving of attention, inasmuch as, varying from the common state and concurrence of morbid condition, they may be said to be anomalous, if such term can be applicable to a deviation from what is in itself but an irregularity.—

And first, the contracted state of the spleen†

* Vide Reports, 4th July, & seq.

† I mean here to notice merely the relative, not the positive condition of the spleen, because little pathological inference can be made from the absolute condition of a viscus, the total absence of which, has in many instances, been unattended by any perceptible derangement of the functions.—Vid. Schenk. Lib. 3tius p. 788. On the other hand, instances are recorded of two, and even three spleens being discovered in the same body, and one is related by Ruysch in his Observ: anat: chirurg: of a large spleen being found in the pelvis, weighing upwards of four pounds, whilst a remarkably small one was discovered in the same subject in the natural situation; a similar case is recorded by Schrader. Observat. rariores anat. medicæ.

demands our attention; for the more usual morbid condition, in which we find the spleen, is that of enlargement, rather than contraction; and again, in all cases of contracted spleen, we shall find it accompanied by an enlarged liver:* here it was the reverse, both were diminished.

In all the cases of contracted bladder, which I have met with in dissection, or have seen recorded, the following were the concomitant appearances: the coats were always found thickened†, the ure-

* The same is found to be the case in experiments where the spleen had been removed. Vid. Commentar: Academiæ Bononiensis—Dissertation by Putius———Tom. 2, part 1, page 151. And on the other hand, a diminished state of the Liver is generally accompanied by an enlargement of the spleen.—Vid. Schenk. Observ. Lib. iii. p. 748.

See also a similar case, where the Liver so changed in size, was removed from its natural situation, and found in the Pelvis. Act. Phys. med. v. x. p. 1.

† Vide Nova acta Physico medica.—Acad. Cæs. Leop. Car.—&c. Norimbergæ.——A.D. 1757, Tom: 1mus, p. 403,—Tom: 3tius p. 576. Acta Helvetica. Basileæ. A.D. 1750, Tom: 3tius, p. 3—paper by Monsieur Rogguin—Tom: 5tus, p. 163—paper by John Hofer—Doctor Baillie's morbid anatomy.—And Phil. Trans. V. 5. p. 258.

ters generally distended*, and the pelvis of the either or both kidneys enlarged; here we have the coats of the natural thickness, the ureters diminished, and no change observable in the form, the size, or the structure of the kidneys.

In his valuable work on morbid anatomy, Doctor Baillie, notices this condition of the bladder, I mean the contracted or diminished state of its cavity, which he is disposed to refer to either or both of two causes.—Namely, a very strong action of the muscular coat of the bladder previously to death, or the loss of its power of dilatation from the frequent habit of contracting upon small quantities of urine.

This, though a very fair and very probable view of the phenomenon as it generally occurs, will not however, at all apply to our case; for, the anterior as well as posterior part of the bladder being firmly bound in adhesions, the muscular coats under those surfaces of adhesion, could have no effect whatever, either on the capacity or contents of the viscus. The only motion the bladder could

* Vide Acta Helvetica physico mathematico medica. Vol. 1. p. 17—Dissertation by Rudolphus Zeinger.

Such cases will be found also in Bonnet. Morgagni. Valsalva. Lieutaud. The Acta Eruditorum, Leipsiæ.—and the Commercium Literarium Norimbergæ.—

take on was similar to that by which a common bellows is emptied of its air, aided perhaps a little by the partial contraction of the transverse muscular fibres at the sides and fundus of the bladder, which, like the leather work of the bellows, in our case were the only parts capable of a free action. I would therefore be disposed to consider this a case of malconformation,* or, if the consequence of habitual contraction, one, in which that diseased action had preceded the formation of adhesions, which will amount to the same thing, the problem still being "how could life be so long, "compatible with such derangement of structure." Will it be said that the apparent imperfection of so many organs increased their affinity to the living principle ?†

* This may not be considered too great a stretch in hypothetical reasoning, as we know of instances, where the bladhas been totally wanting. Vide Nov: Act; Phys. med: V. I. p. 148.—Paper by Ludov: Godofredus Klein—

See also, a very ingenious paper in the 1st. Vol. of the Edinburgh Medical and Surgical Journal by Dr. Duncan Junior, who has taken a full review of most of the cases of morbid structure of the urinary and genital organs on record. There was not however, any appearance of Hernia in the case quoted from Klein—where, beside the defect of the urinary bladder, it was remarked that the left ureter opened into the rectum.

† The converse of this proposition we know to apply to many *classes* of living beings.

We read of cases presenting various morbid appearances of the several viscera; sometimes of the liver, sometimes of the spleen, again of the stomach, the intestines, the bladder, the uterus, &c. the histories of whose symptoms present us with a train of sufferings, oftentimes so great, that, whilst we deplore the unhappy lot of those miserable beings, thus doomed to suffer the inflictions and dispensations of Divine Providence, we cannot help regarding, with an admiration approaching to envy, that fortitude with which they seem inspired, that devoted resignation, by which they seem supported under such afflicting, and such trying visitations. But here, we have these appearances all combined;—here, turn which way we will, we meet disease, and nothing but disease: its loathsome and appalling form, at every step, obtrudes upon our view. And yet the sufferings of this woman were comparatively trifling: the *vital* functions were only occasionally, and even then but little disturbed, the *animal* not at all: the *natural* functions alone seemed affected, and that, not more than we usually find them to have been, under very slight deviations from the healthy state, and where no organic lœsion was discoverable.—Nay, in some particulars, the symptoms and appearances were even less indicative of diseased action than we meet with in the ordinary run of disease, for here, the tongue was clean, even while she was under the influence of mercu-

ry, and remained so to the last; she had no thirst; the pulse was regular;* and the muscular strength considerable,† whilst the mental powers suffered no diminution whatever, to the last moment of her existence:—she died fully sensible of her situation, and perfectly resigned.

There is still one circumstance noticed in the examination of this body, which is peculiarly deserving of attention, inasmuch as it may lead to the further prosecution of a subject highly interesting to the physiologist.

In almost all the instances recorded of examination of hydatids occurring in the human body, we are left entirely to analogy in support of the arguments for their vitality.—We have, no doubt, strong probability of their being animalcules, and though we are unable to account for their produc-

* For four days however, previous to her death, there was not any perceptible pulsation of any of the arteries, there did not appear to be any action whatever of the arterial system, and yet there was no sensible dilatation of the pupils.

† Baron Haller, in his opuscula pathologica, relates the case of a woman, in whom the pulse was deficient for three days before death, with general coldness; and yet the mind was unimpaired; she seemed to retain a considerable share of bodily strength, and her appetite was good.—Obs. 25. Opera Miora.

tion in the human body, on the common principle of generation, yet the same difficulty applies to the sheep, where the vitality is unquestionable. These however, are, at best, but negative and analogical arguments: we have been in want of a proper opportunity of making a decisive experiment on the subject; because it generally happens, that those bodies which we have the opportunity of examining immediately after death, for example, the bodies of criminals, present no diseased appearance whatever, whereas, in subjects who have fallen victims to protracted and lingering diseases, and where alone such an appearance as that in question could be expected, the body is allowed to remain for so long a time after death before it is examined, that the hydatid must have lost its living principle. Such is the reasoning of the ingenious and learned author* of the late celebrated work on morbid anatomy, leaving to us no support beyond mere probability on the present question. But in the case now before us, we had no such obstacle to encounter. No hope was entertained of saving this woman for several months before her death; and for the last four or five days, her dissolution was every moment expected; the protraction of life, might be truly termed in this case, a forced existence.

* Doctor Baillie of London.

Under such circumstances, then, her friends could have no difficulty in consenting to an immediate examination of the body after death. She was accordingly opened by me, in the presence of Doctors Sullivan and Murphy, who both were attending at the hospital, in a short time after her decease.

Though the limbs were stiff, the interior of the body continued warm, through the whole period of the dissection, which lasted some hours. It was to this circumstance we fortunately owed the opportunity of witnessing a palpable contraction of the hydatid found in the left ovarium. I did not try its mobility by the stimulus of warm water, which I regretted afterwards: but, from the remarkable contraction produced by a cautious puncture of its coats, I cannot hesitate to consider it the result of vitality; and that, had the substance been removed and put into warm water, the existence of this principle would have been still more evident.

OBSERVATIONS

ON THE

EPIDEMIC FEVERS

OF

DUBLIN,

FOUNDED ON A REPORT

Of the Hardwicke Fever Hospital,

During the Years 1813, 1814, and 1815,

BY

EDWARD PERCIVAL, M. B. CANTAB;
& DUBLIN: M. R. I. A, &c. &c.

ONE OF THE SENIOR PHYSICIANS TO THE HOSPITALS OF THE HOUSE OF INDUSTRY, &c.

Read, March 12th, 1817.

THE Epidemical diseases of different regions, even within the same climate, vary so considerably, both according to seasons and to local circumstances, as to require the unremitting attention of physicians to their contingent and essential features. The prevention and the cure of

contagious fevers in large towns, obviously depend on the alacrity of medical observation, and perhaps still more, on the ascertainment of those fundamental principles of febrile pathology, which are applicable, under certain modifications, to every variety of epidemical disease. With a view to both of these objects, the communication of concise and digested results of Hospital experience, is a benefit which the public has a right to expect from every Institution of that kind, which is supported by its bounty. The subserviency of such Reports to the purposes of science is too obvious to require comment. Yet the practitioners of our own country have availed themselves less diligently of the affluence of their resources in this respect, than many of their continental neighbours. In records of solitary cases, whether of rare or complicated disease, we are by no means deficient; and much useful though subordinate service is rendered by these scattered lights of knowledge. But the materials of just pathology can be drawn only from large masses of observation, assembled and arranged in the order of their subjects; nor can durable improvements in practice be established on less full and luminous evidence.

The Hospitals attached to the House of Industry in Dublin, present considerable means to the

advancement of pathological science. More than *six hundred* patients are classed in distinct buildings or wards, according to the character of their diseases;—acute and chronic disorders,—contagious fevers of adults and children,—insanity,—ideocy,—surgical cases,—and incurable infirmity. These hospitals* are committed to the care of four physicians, and three surgeons; and let it be added, that their *Governors*, actuated by solid and enlightened views of the public benefit, afford every aid to render the Establishment subservient to science and humanity.

The documents which form the basis of the following paper, are derived from the Fever Hospital of that Institution, the greater part of which devolved upon my care, in the years 1813, 1814 and 1815.—The method which I propose to follow, is, in the first place, to notice the *varieties* and *modifications* of epidemic fever; their relation to the *seasons*, to the *age*, *sex*, and *condition* of the patients.—In the next place, the *general morbid characters* and *progress* of fever, will be adverted to; and lastly, the methods of *remedial practice*.

My clinical notes were compiled for the use of students without the slightest view to publication;

* The Hospitals are denominated by the names of their viceregal founders; the Hardwicke Fever Hospital, the Hardwicke Lunatic Asylum, the Richmond Surgical Hospital, and the Whitworth General Hospital.

but my present colleagues being desirous to produce a series of hospital reports, in their respective departments, I have ventured to revert to the course of my experience in the Hardwicke Hospital, to give commencement to so useful a design. For such imperfections, therefore, as belong to an unpremeditated work of this kind, I may entreat some indulgence ; for the rest, I must hold myself amenable to fair criticism.

The construction of the Hardwicke Fever Hospital merits notice, as furnishing an excellent model for similar institutions. The building is situated on dry and elevated ground, upon a gentle acclivity, at the north eastern extremity of Dublin. It is a plain oblong structure, only two stories high, with underground offices. The entrance is in the centre of the front ; a small but airy hall leads to an ample ward, on the right, and another on the left. Each of these wards, (49 feet long, 20 feet wide, and 15½ feet high,) is lighted and ventilated by windows at opposite sides ; the building being single and without corridors. Each of these wards, at the period of which I write, contained sixteen beds.—Beyond the hall, and opposite to the front door, is a third ward, projecting 21 feet, at right angles from the rear centre of the building. This ward is lighted by two ample windows, but being considerably smaller than the other wards, it contained only six or some-

times seven beds. At the extremities of the building are water-closets. The central part is occupied by the hall, staircase, and nurses apartments; the latter opening into, and commanding a view of the wards to which they respectively belong. The upper floor resembles the lower, except that the wards are less lofty.

Two large fever wards, for young children, are appended to the Hardwicke Hospital, though in a distinct building. At the period of which I write, they accommodated forty-two children, whose cases were indifferently epidemic, sporadic, and symptomatic fever.

Of the wards above described in the Hardwicke Hospital, two *large* and two *small* ones (in each story) devolved upon my care.—This circumstance afforded me an opportunity of comparing the relative advantages of wards, of very different dimensions, in reference both to the patients and their attendants; and experience convinced me, that in the acute stages of fever, when a cool atmosphere, plentiful ventilation, and the assiduous attendance of nurses are required, large wards are decidedly preferable. The air may be steadily renewed, in such ample spaces, without causing sudden vicissitudes or partial currents, and without meeting those diversions from walls and angles, which occur when a similar space is subdivided

into smaller apartments. In every stage of convalescence, however, and in chronically protracted fever, (from visceral disease), when a warmer temperature, and less assiduous attention of nurses are required, small wards possess superior advantages. Accordingly I formed an arrangement, that my patients, on their first admission, should be placed in the large wards, and be removed to the adjacent smaller ones, as soon as they were able to leave their beds; by which disposition, the subjects of acute fever were freed from the molestation of patients moving about the room; and the latter, in their convalescence, were protected from too free a circulation of the atmosphere. Neither the physicians, nor the apothecary, nor his apprentices contracted fever in the course of my experience; and once only, a nurse, in the men's ward, had a regular attack of fever, with petechiæ. The deputies or inferior nurses incurred the disease in only two or three instances, and each recovered favourably.

The patients of the Hardwicke Hospital, are from the lower orders of the community; artisans, servants, labourers, &c. without any peculiar restriction. But the cases admitted are not exclusively epidemic or contagious fevers; as the hospital arrangements have hitherto rendered it convenient to treat other acute febrile diseases in this department. The General hospital now com-

pleting, for the reception of inflammatory and symptomatic fevers, as well as chronic disorders, will tend hereafter to a more accurate discrimination of practice. But at the period from which the following reports are derived, many causes concurred to render the Registry of the Hardwicke Hospital more complicated in its aspect, and less satisfactory as a criterion of practice than might be desired. The exigencies of the House of Industry to which the hospital is attached, the concentration of unpromising subjects for febrile disease, in a crowded depot of paupers,* and the necessity of removing the worst and most involved cases, conspired to render the business of the hospital less apparently successful in its results, but by no means less answerable to the wants of the public, than in hospitals which more strictly limit the objects of admission.

* The hospital being connected with the House of Industry, is *primarily* subservient to the contingencies of that Establishment, which until lately contained a fluctuating population of about three thousand paupers, crowded in to very inadequate dormitories. *A dernier ressort* of this description, (analogous to the parish work-houses in England,) and comprising the wreck of broken and worn out subjects in a large city, presented unfavourable materials for the visitations of epidemic fever. Many cases of visceral phthisis, with symptomatic fever, were transferred to the hospital; frequently *petechiæ* and other typhoid symptoms were superinduced on such organic diseases; and as the subjects of these complicated maladies

It is the custom in many fever hospitals, for the physicians to visit the applicants for admission at their own houses, in order to select such cases as are most likely to derive benefit from hospital treatment. By this precaution, some useless removals of dying persons are obviated, and the records of mortality in the hospital are curtailed. But these benefits lightly compensate for the loss of time, health, and life of the medical officers engaged in that duty. The most ignorant paupers can distinguish fevers, from other diseases; and on their report alone, admissions may be granted, and directions given, to ventilate, cleanse, and whitewash the dwellings of the sick. These regulations have been wisely adopted in the Hardwicke Hospital; and I cannot forego the occasion of giving my testimony in their favour.

In exploring the wards of a Fever hospital, for some time, the attentive practitioner will discern two leading *classes* of facts, presented to his observation. The one comprehends the specifical changes or varieties of fever, which present them-

were often the most abject victims of penury and intemperance, these peculiar sources of mortality must be regarded, in estimating the miscellaneous information of the Registry.

selves in succession through the year. The other embraces the features of generic resemblance, common to the great mass of fevers in all seasons. Of these classes of phenomena, the former may be referred to the natural history of fever, the latter to its essential pathology. The ancients, who were faithful historians of nature, cultivated chiefly the former department; the moderns, who have aimed rather at systematic arrangements, have, with some exceptions, employed their industry in the latter. Each of these methods of enquiry has its advantages and defects; but neither can be disregarded without material injury to science.—When Hippocrates boldly declared* that "he esteemed it the greatest excellence, in the art "of physic, to discern with precision the constituti- "ons of the seasons, and the diseases that attend "them," he certainly did not anticipate that mastery over the general principles of nosology, which has given to the moderns so much insight into every particular disease, through the evidence of its symptoms. Sydenham, the father of English physic, and a disciple of the ancient masters, insisted much on "an occult temperament† or con- "stitution of the air, productive of different dis- "eases in different seasons;" and frequently complained of the inadvertency of the physicians of his

* Epidem. lib. III. sect. III. Consult also his treatise "de aere, locis, et aquis."

own time, to this instrument of disease.* In his own writings, he has followed pretty much the course of the seasons, and of annual epidemics. Yet neither the precepts nor the example of these high authorities have induced many followers to pursue the track of historical record, in their medical writings. The form is cumbrous, the repetitions are inevitably frequent and tedious, and the contributions, thus supplied to the existing stock of knowledge, are often too thinly scattered, to recompense the labour of seeking for them, through a multiciplicity of details. I confess, therefore, that the mixed method which has been sanctioned by some of our best writers, appears to me to be most advantageous both for practical and scientific uses; and in deference to their example, I propose, in the following report, to pursue the natural order of my subject, rather than the adventitious order of time; premising only such general observations in refer-

* This occult temparament is referred by Sydenham, to "some influence of the planets, or secret vicissitudes in the "bowels of the earth." So little was he disposed, however, to dogmatize on this subject, or to imagine that he had discovered any invariable connection between the seasons and different modifications of fever, that he made the following candid acknowledgement in one of his latest writings, "Mihi hacte- "nus satis fuerat ad generalia febrium symptomata attendere; "utpote qui nondum vel juxta varias annorum crases, aut "ejusdem anni varia tempora, easdem distingui posse animad- "verteram." Sched. monit. prope finem.

ence to the seasons of the year, the ages and sex of febrile subjects, as are necessary to illustrate the epidemical history of the period of which I write.

The *season* of greatest pressure for admission to the Hardwicke Hospital, was usually from the commencement of Spring until Mid-summer. Whatever be the causes which generate or diffuse epidemic diseases, it appeared, that, among the adult poor in the House of Industry, and still more remarkably among the children, crowded as they all were, (from the distresses of the times,) in very inadequate dormitories, fever spread with peculiar facility on the dawn of mild weather, after the severity of winter. I could even trace this fact in the strongly marked vicissitudes of Spring, which belong to this climate. A single week of soft or sultry weather, after a prevalence of sharp winds and cloudy skies, was followed by manifestations of fever, requiring prompt vigilance to control its progress.

The subjects of the *vernal epidemic* were chiefly the young and the robust. If persons past the middle age were involved in it, they were generally such as had impaired constitutions, or diseased pulmonary organs. Yet many cases of petechial and typhoid fever occurred without distinction of age; parents and children being

transferred to the Hospital at the same time, labouring under similar diseases.

The vernal epidemic was more generally inflammatory, (or as the French perhaps better express it, by a Greek compound, *angeiotenique*) than any other, which usually appeared through the year. It commenced almost uniformly with shivering, head-ache, and lassitude. Catarrhal and peripneumonic symptoms prevailed in the early stages, and sometimes to the close of the fever; yet the disease seldom began with acute pains in any part of the chest, but rather with oppressed respiration. I judge that the bronchial or mucous tissue was generally the seat of congestion, from the absence of acute and locally defined pain, in a large proportion of cases, from the visible condition of certain parts of the mucous membrane, and from the easy resolution of the distress by expectoration. In some cases, however, (as morbid dissection demonstrated,) the entire substance of the organ, and the investing pleura, were also engaged; especially when the fever had become severe and protracted, from early neglect or mismanagement, before the patient was received into the hospital.

The bulk of vernal cases being of a mild kind, the average term of the fever was short; it seldom exceeded nine days, when the patients were ad-

mitted early, and often terminated in seven, if the patient was youthful and robust. Although there were sometimes manifest remissions in this fever, yet I did not observe any cases of conversion to the true intermittent, as is noticed by Sydenham, Grant, and other writers, on the synochus of London. The mortality attending this epidemic, was small; alighting almost exclusively on phthisical subjects or depraved and worn out habits.

The typhus of modern writers, was prevalent in the spring; and though it declined as the season advanced, yet specimens of the worst kind continued frequently to appear as intercurrents. Most of the children from the Bedford Asylum exhibited minute dusky petechiæ on the trunk of their bodies, and very often on their extremities. But these spots disappeared, commonly, in the space of forty-eight hours after the patients had been submitted to the purgative discipline, and cool wards of the Hospital. Such cases were mild and prosperous. But the complication of catarrh and peripneumony, with the extreme symptoms of typhoid debility, was at all times alarming, and more frequent in the spring, than at any other season.

The *summer* solstice produced no sudden change in arresting the epidemic, or converting

its character. Catarrhal symptoms continued, but pneumonic distress gradually declined, as the warm weather grew confirmed. Pain and heat of the stomach, with great tenderness of the epigastrium, began to prevail. Retching or vomiting of bile and mucus sometimes occasioned much distress to the patient, who appeared to labour under peculiar feelings of irritation and despondency. The right hypochondriac region, and the epigastric, so far as the umbilicus, became soon engaged with soreness and oppression; the bowels were constipated, the skin dry and hot; yet the pulse was feebler, and the angiotenic character less observable than in the preceding epidemic.

These symptoms were marked most clearly in patients of middle age, among whom this fever prevailed chiefly. Its duration depended much on the period at which the patient was admitted to the Hospital; yet the term of acute fever did not often exceed nine days,* unless when it was complicated with tympany, singultus, insomnium, and other alarming symptoms.

* The worst cases were those which had been ill treated or wholly neglected in their commencement, and transferred to the hospital, later than the seventh or tenth days. "A summer fever (says Doctor Grant), if well treated from the beginning, is frequently carried off in four days, and seldom exceeds nine; if ill treated, it easily becomes petechial, malignant, and often fatal in a few days, at other times very anomalous, aphthous and tedious." Grant's Obs. on Fevers, Vol. II. 47.

M. Pinel justly condemns the use of the vague term bilious fever, applied to this species, and proposes to substitute the more definite appellation "meningo-gastrique." "Tout semble indi-"quer que le siége principal des maladies de cet "ordre est dans la conduit alimentaire, surtout, "l'estomac et le duodenum, non moins que "dans les organes sécretéurs de la bile et du suc "pancréatique."*

The *autumnal* epidemic (which generally extended itself into the winter) partook of the character of the antecedent fever, in derangement of the mucous membrane and hepatic viscus. But the seat of peculiar congestion in the autumnal fever, was the inner surface of the intestines, and sometimes the mesenteric organs. The type of this epidemic, was more irregular than any other; its invasion more obscure; its progress and duration less defined. The subjects of the disease were often broken and declining constitutions, in which the digestive organs had been long impaired; and under these circumstances, if the patient escaped the first violence of febrile excitement, he incurred no less hazard, from imperfect crisis, relapses, hectic fever, and marasmus. Under the pressure of typhoid symptoms, also, the fever proved dangerous; but the young and the

* Nosog. Philos. tome 1, p. 90.

robust usually experienced the disease in a mild form. Women, if they were not dram-drinkers, bore it more favourably than men; and amongst these latter, the danger was greater in proportion to their age and visceral infirmities. Though agues prevail in some parts of the neighbourhood of Dublin, yet the patients are rarely sent to the hospitals of the city; and neither my notes, nor my recollection, furnish any examples of the autumnal synochus degenerating into the true intermittent fever.

The worst forms of typhous fever prevailed at an advanced period of the *winter*. Livid blotches, a dry tongue, dark and tenacious mucus on the gums and lips, muttering delirium, singultus and lethargy were frequent symptoms. Peripneumonic distress attended, at least the commencement of most of these cases. The hepatic viscus was also frequently engaged. But the peculiar seat of sanguineous congestion appeared to be the brain and its investing membranes.

All ages, except infancy, were liable to this fever; the duration of which, under the circumstances above described, seldom fell short of fourteen days and often exceeded seventeen. It is needless to add, that it proved more frequently fatal than any other form of epidemic or contagious fever.—Danger was to be apprehended under all circumstances of bodily constitution; yet the fatal cases

which I had an opportunity of exploring by dissection, generally exhibited, besides cerebral congestion, extensive visceral disease.

This sketch of the cycle of epidemic fevers, which appeared successively through the year, in the Hardwicke Hospital, is obviously a mere outline; which the documents before me might serve to amplify or illustrate, were I not anxious to be concise, on a subject which will recur to frequent notice, in the sequel of this paper. I would here however observe, that whilst the modifications of fever just mentioned usually attended the course of the seasons, yet they were by no means limited to the periods respectively assigned to them. On the contrary, intercurrent and sporadic cases of each kind, appeared indiscriminately in all seasons. The age and habit of the patient, personal and local contingencies, vicissitudes of weather, and contagious influence, variously operating, diversified unceasingly the reigning epidemic. In the variable climate of this island, the seasons are very indistinctly marked; and the epidemics partake of the same uncertain and mutable character. It has long been observed, that protracted dry weather is peculiarly productive of fever in Dublin; and that rainy weather, which is the prevalent character of the climate, agrees best with the general health of its inhabitants. This fact, however, does not militate

against the observation of Hippocrates, that, "in "defined and settled seasons, when the weather "is temperate, the diseases which appear are of a "good kind, and of easy solution; but in unsettled "seasons, diseases of unsettled type, and difficult "of solution."* Thus in the equinoctial (the vernal and autumnal) periods, when the direction of the winds, and the temparature of the atmosphere are continually varying, febrile diseases are more prevalent or more complicated than in the settled periods of summer and winter.—Let it be carefully observed, however, that in this region, no dogmatic rule can be laid down, corresponding with the seasons, to determine either the character of epidemic fevers, or the modes of their curative treatment.

Willis, Morton, and Sydenham, the earliest medical writers of note in England, describe the spring and commencement of the summer as seasons of the greatest febrile activity; and it is worthy of remark, that the first severe typhoid epidemic of which Sydenham gives a detailed account (in his "schedula monitoria,") made its appearance in London, in February 1625, "after a thaw, on the subsidence of wintry cold." At first, Sydenham was misled by the appearance of cough and embarassed respiration, to assimilate this fever with peripneumonia notha; but he af-

* Hipp. Epidem. lib. 2. Sect. 1.

terwards retracted this conjecture, on observing that these symptoms were not essential to the disease, but disappeared with the progress of summer, although the fever continued to prevail.

The experience of Sydenham*, Willis, and Morton, has been confirmed by successive observations down to the present time. Both inflammatory and typhous fevers, (as they are usually termed) prevail in the spring, and are alike characterised by catarrhal and peripneumonic affections.—An opinion has sometimes been hazarded

* Sydenham, who was now in advanced age, speaks of this fever as "febris *nova* species, *novæ* cujusdam constitutionis." It cannot be supposed that the term "nova" is here used in its absolute signification; but rather to imply that a typhoid epidemic of so severe and fatal a kind, unconnected with plague, had not occurred during the long period of his practice. The fever, however, is accurately described by Willis.—It deserves notice, (as a circumstance corroborated by many similar facts), that intermitting and remitting fevers had declined remarkably before the appearance of this epidemic.—The last years of this declension, were attended with severe winters, especially that of 1623,–4, in which the cold was more intense, and continued longer, than was remembered by any living person; for the Thames was so completely frozen, as to bear the weight of carts and booths, with different kinds of merchandize, and vast crowds of people. The petechial epidemic described by Sydenham, commenced in February 1624, and reviving in the same month of the following year, spread itself all over England, and was even more prevalent in other places than in London. Vide "Schedulam Monitoriam."

that typhus is extinguished by the heats of summer; and this appears to have been the frequent experience of our armies and navy in warm climates. But the fact is otherwise, not only in the cities, but in the country parts of our own islands. To cite evidences on this subject, would lead to an undue and perhaps needless digression. In reference to the Hardwicke Hospital during the years 1813, 1814 and 1815, I may state, that although the worst forms of typhus became less prevalent as the summer advanced, yet no period of the year was exempt from the typhus gravior of Cullen, the jail fever of Pringle, or the putrid fever of Huxham. If, according to the latter authority, the appearance of petechiæ be taken as characteristical, my notes shew, that in the month of May 1813, one-third of the cases admitted to my wards exhibited this symptom; in the month of June, they exceeded this proportion; in July, they constituted the major part; in August, they amounted to nearly one half; in September, they again formed the greater part; and in October were reduced to the proportion of one-fourth. It is probable that some temporary causes, both in the City of Dublin, and the House of Industry, contributed to the unremitting production of this petechial fever, which has not been observed to prevail to a similar extent in other years. Neither did many of the cases, here referred to, run the full course of typhoid symptoms. But as ex-

amples of the worst kind appeared successively through the summer, in strict connection with the petechial fevers of milder type, considerable evidence was afforded of their common origin and generic character; modified by accidents of bodily and mental predisposition, by the qualities of air and food, by the measure of labour and confinement, and above all by early or late remedial treatment.

The following Table exhibits the total amount of patients admitted to the Hardwicke Hospital during the years 1813, 1814 and 1815, specifying the number received in each month respectively.

TABLE OF MONTHLY AND ANNUAL ADMISSIONS.

A. D.	Jan.	Feb.	Mar.	Apri	May	June	Total.	Total of each Year.
1813	180	153	171	118	147	162	931	A.D. 1813,
1814	137	112	146	166	162	131	854	1842.
1815	167	170	187	162	231	232	1149	A.D. 1814,
Total	484	435	504	446	540	525	2934	2012.
A.D.	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total.	A.D. 1815,
1813	149	171	137	148	149	157	911	2388.
1814	159	216	208	206	192	181	1158	Grand Total.
1815	214	205	205	219	167	206	1239	6242.
Total	522	592	569	573	508	544	3308	

Average per Month, 173. Do. per Year, 2080.

Were the accommodations of the Hardwicke Hospital, or of the collective Fever Hospitals in this city, adequate to the exigencies of the town and neighbourhood, at all times, a table of this kind would exhibit a correct view of the comparative prevalence of fever in different seasons. It happens, however, in Dublin as in other places, that these accommodations are considerably deficient. In the Hardwicke Hospital, numerous applications are rejected, from this cause, when epidemics are most rife; and many of the sick are deterred from becoming applicants by the rumour of these rejections. No names are entered in the Registry, but those of patients actually received into the Hospital; so that an estimate of the varying pressure upon the institution cannot be derived wholly from its internal records.

According to an average of three years, the number of patients admitted in each month, observed the following order of decrement; viz. August, October, September, December, May, June, July, November, March, January, April, February.

Thus it appears, that in the four first months of the year, the admissions were the least considerable; a circumstance which is explained, in part, by the more limited diffusion of the winter epidemic, and partly, by the more protracted duration of

typhous cases. It is further accounted for, by the phthisical sequelæ, incident to the vernal epidemic, and the consequent lingering of patients in the Hospital after their convalescence. But besides these permanent causes, a temporary extension, in seasons of great pressure, was provided in a building remote from the hospital, and containing two fever wards; which in the spring of the year afforded much relief to the main Institution.

The most numerous admissions appear to have occurred in the autumnal months of August, September, and October, when the reigning epidemic is usually mild and of short duration, and the cases are rapidly transmitted through the hospital. The summer months hold a medium, in which November and December may likewise be classed.

It must be observed, however, that these average results correspond imperfectly with the items of the respective months in each year, separately taken; a consideration which qualifies the value of their testimony, and points to the expediency of framing more ample calculations.

The relative proportion of males and females admitted in each month, is exhibited in the following Table.

Months.	January.		February.		March.		April.		May.		June.		Total.	
Years.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Males.	Females.
1813	69	111	72	81	68	103	61	57	64	83	72	90	406	525
1814	52	85	39	73	52	94	62	104	63	99	52	79	320	534
1815	80	87	80	90	88	99	76	86	100	131	106	126	530	619
Total.	201	283	191	244	208	296	199	247	227	313	230	295	1256	1678
Months.	July.		August.		Septem.		October.		Novem.		Decem.		Total.	
Years.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Males.	Females.
1813	65	84	73	98	57	80	75	73	62	87	60	97	392	519
1814	72	87	78	138	86	118	84	122	95	97	71	110	486	672
1815	105	109	85	120	109	119	96	123	74	93	81	1 5	550	689
Total.	242	280	236	356	252	317	255	318	231	277	212	332	1428	1880

Grand Total; MALES, 2684. FEMALES, 3558.

By this document, it appears that in every month, throughout the three years, the number of females admitted exceeded that of males; the total number of each yielding a proportion of nearly *three* of the former to *two*, of the latter.—In most Fever Hospitals, there is a considerable preponderance of females; and this disproportion is augmented in the Hardwicke Hospital by its local connection with the House of Industry, whose inmates are chiefly of that sex. It is not improbable that women are constitutionally more susceptible of epidemic fever than men; but it is obvious that they are more exposed to contagion, by their close confinement to ill ventilated habitations, and by their performing almost exclusively the offices of attendance on the sick. In the chances of mortality, however, females appear to be privileged more highly than men. In the Hardwicke Hospital, notwithstanding the great disparity of their relative admissions, the deaths of male patients somewhat exceeded those of females; affording a proportion of mortality, somewhat higher than *three* to *two*.

This fact is interesting in a two-fold view; as it seems to cancel the disproportion observed in the contingencies of sickness, and thus to vindicate the admirable equality of Providence;—and further, as it points to certain causes of mortality from epidemic fevers in general. It is obvious that the

lower classes of men are more exposed to violence and hardships, and more addicted to intemperance and excess of all kinds, than women of the same rank. After a certain period of life, therefore, their habits of body become more depraved, and their visceral organs, particularly the liver more frequently and deeply diseased. In such subjects, febrile actions, from whatever cause they originate, fall upon the diseased organ with peculiar force, and not only augment, but greatly complicate the fever. Tubercles, scirrhi, and chronically inflamed parts assume new morbid conditions, which often terminate in abscess or exulceration. Hectic being thus formed, the patient sinks sooner or later irremediably; and the evidence of morbid dissection reveals the extent of the organic mischief.—The victims of intemperance, through this indirect but certain channel of fatality, are very numerous; and women who are addicted to the abuse of ardent spirits seem to perish under fever, even more certainly than men. They are more generally dram-drinkers throughout the day, and having less interruption or sanative relief from exercises of the body, they fall an easier prey to disease.

Of the fatal cases which occurred to my observation in the Hardwicke Hospital, the greater number exhibited, on dissection, evidences of antecedent visceral disease kindled into new actions, or the suppurative process, by the violence

of febrile circulation. The Lungs, the Liver, the Mesentery, and mucous surface of the primæ viæ, were the parts chiefly implicated in this destruction; and the character of the reigning epidemic, commonly (but by no means invariably)determined the organ thus engaged. Hence the infirm, whether from long hardship, intemperance, or morbid constitution, fell a sacrifice to epidemics, which the young and robust weathered through, with little injury or danger.

In the following Table the patients of the Hardwicke Hospital are represented in the relation of their ages, and the seasons of their respective admission.*

* In reducing this Table from the bulky records of the Hospital, I have been much assisted by my friend and clinical clerk, Mr. Crawford, who inherits the scientific taste and industry of his father the late Dr. Adair Crawford.

Table representing the respective ages of the Patients :

JANUARY.

Ages.	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	90
1813	6	18	12	16	19	19	6	18	4	8	3	4	2	1	1	0	0
1814	10	26	28	14	21	20	9	13	6	5	4	5	3	4	0	0	0
1815	7	42	23	19	24	27	7	13	2	6	1	4	3	0	1	0	1
Total	23	86	63	49	64	66	22	44	12	19	8	13	7	5	0		1

FEBRUARY.

1813	15	25	13	17	21	24	9	7	1	7	4	4	3	2	0	0	1
1814	2	9	11	14	20	25	6	8	3	4	3	5	0	1	0	1	0
1815	7	23	15	22	21	25	8	21	5	9	4	6	1	3	0	0	0
Total	24	57	39	53	62	74	23	36	9	20	11	15	4	6	0	1	1

MARCH.

1813	12	25	24	29	16	24	4	6	5	10	0	10	1	2	3	0	0
1814	4	23	17	25	14	14	7	20	4	8	3	6	1	0	0	0	0
8115	6	19	17	29	30	10	9	14	4	6	4	7	1	0	0	0	0
Total.	22	67	58	83	60	78	20	40	13	24	7	23	3	2	3	0	0

APRIL.

1813	5	16	20	13	15	15	6	11	4	3	2	3	2	1	1	1	0
1814	4	20	25	23	16	27	11	16	2	11	4	4	1	2	0	0	0
1815	11	18	16	20	17	24	9	15	6	12	2	10	1	1	0	0	0
Total,	20	54	61	56	48	66	26	42	12	26	8	17	4	4	1	1	0

MAY.

Ages.	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	90
1813	11	23	20	14	12	18	7	11	4	11	3	5	2	4	2	0	0
1814	5	24	15	21	20	19	11	12	5	14	8	4	1	1	0	2	0
1815	7	41	29	25	36	35	17	20	4	12	2	3	0	0	0	0	0
Total,	23	88	64	60	68	72	35	43	13	37	13	12	3	5	2	2	0

JUNE.

1813	4	26	18	18	16	30	4	22	3	12	2	6	0	1	0	0	0
1814	3	14	18	18	20	14	12	12	4	5	3	5	0	2	0	0	1
1815	21	56	23	23	23	21	13	18	7	10	6	6	4	1	0	0	0
Total,	28	96	59	59	59	65	29	52	14	27	11	[illegible]	4	4	0	0	1

JULY.

1813	15	20	19	20	20	14	22	3	16	4	4	5	5	1	0	0	0
1814	4	7	26	20	24	22	16	11	7	10	5	7	2	5	0	2	1
1815	14	23	21	40	33	22	15	16	11	12	1	4	0	2	0	0	0
Total,	33	50	66	8	77	58	43	30	34	26	10	16	7	8	0	2	1

AUGUST.

1813	8	18	23	20	19	28	12	21	5	6	5	6	0	0	0	0	0
1814	7	39	27	29	22	26	11	22	4	13	5	4	3	2	1	0	1
1815	5	16	36	29	31	25	10	12	7	14	6	7	3	1	1	2	0
Total,	20	73	86	78	72	79	33	55	16	33	16	17	6	3	2	2	1

SEPTEMBER.

Ages	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	90
1313	6	17	10	22	20	21	8	8	7	6	2	5	2	3	0	0	0
1814	5	34	25	23	19	36	12	18	4	15	3	7	3	0	0	0	0
1815	9	39	33	30	33	30	14	13	3	10	4	0	3	5	2	0	0
Total,	20	90	68	75	72	87	34	39	14	31	9	12	8	8	2	0	0

OCTOBER.

1813	5	30	16	21	24	20	3	9	6	6	4	3	1	0	0	0	0
1814	10	42	27	21	22	28	8	17	7	7	3	9	1	2	0	1	1
1815	21	39	21	32	28	25	9	11	10	4	5	6		3	0	1	1
Total,	36	111	67	74	74	73	20	37	23	17	12	18	5	5	0	2	2

NOVEMBER.

1813	6	16	11	23	27	17	11	11	5	9	4	4	1	2	1	0	0
1814	3	31	38	20	20	17	17	16	5	7	5	5	2	3	2	0	1
1815	9	35	24	25	17	18	3	19	4	5	1	4	0	1	2	0	0
Total,	18	82	73	68	64	52	31	46	14	21	10	13	3	6	5	0	1

DECEMBER.

1813	3	23	20	20	25	22	5	7	4	7	6	7	6	1	0	1	0
1814	13	37	17	19	20	22	5	17	6	10	3	4	2	3	1	1	1
1815	3	33	34	25	26	31	13	13	9	13	2	3	0	1	0	0	0
Total,	19	93	71	64	71	75	23	37	19	30	11	14	8	5	1	1	1

I forbear entering on any calculations, which this table might suggest, as to the relation between the seasons of the year, and different periods of life, which are respectively incident to febrile diseases. In truth the scale of observation is too limited, to justify any positive conclusions on this subject. More extended experience, and an assemblage of similar documents from other Fever Hospitals, might illustrate a point of no inconsiderable importance, in the natural history of epidemics, and the general morbid history of man.

Young children are extremely incident to vernal fevers, with catarrhal or peripneumonic affection. They are also prone to disorder of the mucous membrane of the intestines, which involves them largely in the autumnal fever.—But besides these periodical disorders, they are liable to small pox, measles, scarlatina, and ephemeral fevers of the most irregular invasion.

The following Table affords the aggregate of patients, arranged under their respective ages, for a term of three years.

Yrs.	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	90
1813	97	281	281	236	233	268	79	142	50	87	38	62	22	16	8	3	1
1814	66	298	298	249	236	269	112	87	55	112	48	64	8	22	5	7	6
1815	123	363	368	314	316	16	129	185	76	112	41	61	18	22	6	3	1
Totl.	286	947	947	799	785	853	320	514	181	311	127	187	5	60	19	13	10

It is here necessary to remark, that as the lower orders of people are very inaccurately acquainted with their ages, they are apt to compute loosely by decads; which explains an apparent anomaly in the foregoing Table, viz. that the intermediate periods, as 35, 45, &c. are remarkably less numerous, than the contiguous even decads. It may be observed also, that the ignorance of the poor as to the precise date of their birth, leads them more frequently to underrate than to overrate their ages; which circumstance must be considered as having a corrective bearing onwards in the computation from infancy.

The age of *ten* years affords the largest number of patients, viz. 947. The age of *thirty* ranks next in productiveness, viz. 853; then follow in order, *twenty-five*, *twenty*, *fifteen*, *forty*, *thirty-five*, &c.

The accommodation appropriated to children, in the two Wards adjoining the Hardwicke Hospital, augments considerably the proportion of young patients, compared with adults, in the general record. Yet the total number specified at the age of *thirty*, amounts nearly to that which is specified at the age of *ten*, and of the adults the great bulk appears to have been between the ages of *twenty* and *forty* inclusively. This preponderance of

cases at the middle period of life, does not exceed the proportion of men and women of that age, living at any given time in a city so populous as Dublin, and so largely supplied from the country by new inhabitants at the same period of life. Doctor Price ascertained that "at least one quarter of all that die in London are emigrants and not natives." "In the London Bills (says he) the number of deaths between 20 and 30 (years of age) is generally above double, and between 30 and 40 near triple, the number of deaths between 10 and 20. And the true account of this is, that from the age of 18 or 20 to 35 and 40, there is a confluence of people every year to London from the country, which occasions a great increase of the number of the inhabitants at these ages, and consequently raises the deaths, for all ages above 20, considerably above their due proportion, when compared with the number of deaths before twenty."* These considerations, bearing reference to all large towns, and especially to metropolitan cities, deserve a careful regard in the construction of tables, designed to ascertain the relative proneness of different ages to epidemical fever.

I have already observed, that the natural history of Epidemic Fevers, is involved in much obscurity. The circumstances which favour their origin, which promote yet control their diffusion, and

* Price on Annuities, Vol. I. page 336. 346.

which eventually govern their decline, are almost wholly unknown. Endemic fevers obey pretty generally the course of the seasons. But epidemics are only partially or uncertainly affected by those vicissitudes.

One cause, which complicates the history of epidemic fevers, is the principle of *contagious* propagation ; a principle, which is ascertained to operate with activity and a certain precision, in the more defined species, and which (it is probable at least) operates in some degree in all. I say in *some degree*—for it is manfest, that contagious influence is modified or graduated by causes many of which are beyond our discernment ; since the fevers that indisputably propagate their kind, as Small Pox, Scarlet Fever, Measles, Typhus, Plague, &c. have their periods of prevalence and declension, independently of the interference of human art. In truth were there no means, but those which man is acquainted with, for restraining the geometrical marches of contagious fever, the race might have been extinguished many ages ago.

It would be foreign to my purpose, to enter here on a critical examination of the controversies respecting contagion. Many of the points at issue are doubtless of very difficult solution. Dr. Haygarth and other writers have done much to ascer-

tain what are termed the laws of contagion ; yet in applying them to particular cases, great embarrassment arises from the calculation of almost indeterminable contingencies. Besides, where the evidence is circumstantial, *negative* proof cannot easily be obtained ; nor are *positive* circumstances always conclusive. In large towns, the continual prevalence of epidemic fever renders it difficult to deny the agency of so subtle a principle as that of febrile contagion, in almost any case that may occur. Yet, on the other hand, sporadic cases do unquestionably appear, under such insulated circumstances, as to preclude all proof or presumption of their contagious origin. Hence arises an important question ; do these apparently spontaneous cases differ, in their symptoms or nosological character, from other concurrent cases which are referable to contagion ?—Let *Typhus** be taken for an example ; and let it be enquired, first, whether every case of this genus, which occurs in private or hospital practice, can, by circumstantial evidence, be referred to contagion ? and secondly, whether

* " The Typhus of Dr. Cullen, the contagious Fever of Dr. Lind, the febris inirritativa of Dr. Darwin. In popular language it is generally called the nervous fever, and where particular symptoms appear, the putrid fever. It is usually produced in situations where there is a want of cleanliness, and more especially of ventilation, and when produced it is propagated by contagion. This is the common fever of England."—Currie's Medical Reports, Vol. I. p. 15.

there be any diagnostic which shall enable a skilful practitioner to determine, by the appearances of the disease, in any given case, whether it be of contagious origin or otherwise? I am aware, that much pains have been taken to disembarrass the science of Physic of these questions, by various artificial and hypothetical arrangements. But truth demands a more rigid adherence to experimental knowledge; and a candid enquirer might entertain doubts, whether modern writers have in any respect invalidated the experience transmitted to them by remote authors, concerning the equivocal generation of typhous fevers. For my own part, diffident as I am of my individual judgment in so obscure a matter, I must freely acknowledge, that no recent authorities have cancelled my assent to the opinions of Willis, Huxham, Grant, and Pringle; opinions, which were formed by those faithful observers of nature, without any bias or suspicion of controversy.

Willis, in his Treatise "De Febribus." ascribes putrid or malignant fevers to contagion, to the breathing of foul air and to internal disorder, with certain constitutional predispositions. These fevers he asserts may be epidemic or sporadic; may visit individuals only, or extend themselves gradually over a district. At the close of his Treatise, several cases are related of putrid or petechial fever, spontaneously generated ("sine causâ manifesta.")

in one of the younger members of a family, which spread among the rest of the household, and their visitors, proving fatal to some of them. In various parts of the same work, the author asserts that Synocha, Synochus putrida, maligna, differ in form and degree only, and not in kind, ("non "specie sed gradu tantum,") and, that the milder are convertible into the severer forms, according to the contingency of circumstances. He is of opinion that contagion operates with more sudden virulence, than other external or internal causes of fever; and he assumes this as a criterion of probable judgment concerning the origin of any given case of fever.*

Huxham, who laboured with much care to discriminate the "slow nervous fever," from the "putrid malignant fever," admits that each may have a spontaneous as well as contagious origin, and declares himself to be "very sensible that the one may be, and very often is blended with the other."†

"I have endeavoured, (says Sir John Pringle,‡)

*It is remarkable that Sydenham and Morton have almost entirely overlooked the *contagious* property of fevers; the propagation of small pox and malignant fever is alike referred by the former to "a variolous constitution of the air."

† Essay on Fevers, page 73.

‡ "Observations on the diseases of the Army." page 349. 350.---329.

to distinguish them (malignant fevers) from all others as far as could be done, in distempers with symptoms so much alike. The nervous fevers seem to belong to the inflammatory and bilious classes, though incident to such chiefly as are of a weak and lax habit. But *whatever* gives the first rise to them, if they end in petechial spots, putrid sweats, or *become contagious*, we may from thence conclude, that by the long continuance of the fever, the humours are become putrid, or in other words, that the nervous fever is changed into one of a malignant form, akin to that of hospitals and jails."* —In another place, the same writer asserts that "malignant fevers are various, but all depend upon "some *internal* or *external* fomes of corruption, "whether owing to a *putrid habit*, or to *exhala-* "*tions* from corrupted animal and vegetable sub- "stances."

Without regarding the speculative, and to say the least very questionable opinions of these writers, respecting the fomites of putrifying animal

* Doctor Grant, speaking of the fevers which he terms pestilential or malignant, observes, that they "are either of foreign "importation, or the necessary consequence of some extraor- "dinary combination, and produced in a gaol or hospital, by "bad water, bad provisions, or some other cause, co-operating "with the climate and manner of life. These fevers are *gene-* "*rally contagious*; which the common fevers are not, except "their nature is altered, and they are *rendered* malignant by "bad treatment." See Obs. Fevers, Vol. II. p. 33.

and vegetable matters,* their testimony concerning the equivocal origin and mutual convergency of putrid and nervous fevers, merits all the attention which may be claimed by their known accuracy as observers of facts. To cite later authorities, would be, in most instances, to transcribe the same doctrine, couched in some varities of technical language.†

Some recent and respectable writers have laboured to shew, that typhus cannot be produced, by any cause or combination of causes, except its own specific contagion ; and therefore that it is propagated *only* by successive reproduction of

* Dr. Bancroft has most ably investigated this subject in his "Essay on Yellow Fever." He appears to me to have demonstrated, that animal substances in a state of putrefaction, and wholly disconnected with a living structure, do not, by their effluvia *alone*, however concentrated, produce fevers of any description. How far such effluvia may quicken the alacrity of other causes, I cannot determine ; nor do I conceive it to be a matter of much importance. That putrifying *vegetable* substances, may under certain conditions, generate fevers is proved by the operation of marsh miasmata, and of the effluvia proceeding from heaps of the indigo plant, (in the East and West Indies,) piled for manure after the colouring matter is extracted; and likewise from hemp and flax macerating in large quantities in stagnant water.

† "La fievre typhode est peut-étre de toutes les maladies susceptibles de se repandre par contagion, la seule dont l'origine spontanée soit bien connue." Le typhus n'est point une maladie *sui generis*, mais la fievre, adynamique et ataxique, elle recoit les variations du mode epidemique." Dict, des Sciensces Med. tome xv. 450. xii. 487.

contagious matter in subjects labouring under that specific fever.§ Now as a certain proportion only of the petechial and typhoid fevers which occur either in hospital or private practice, can be distinctly imputed to contagion, it is manifest that the doctrine here proposed demands a very precise and limited definition of the term *Typhus*. I concur with Doctor Bancroft, the most ingenious

§ This doctrine has been maintained on an hypothesis which assimilates Typhus with the Exanthematous Fevers. I have many doubts, however, as to the *exclusively* contagious origin even of this latter class of Pyrexiæ. The facts which relate to their epidemic appearance, sudden diffusion, and as sudden disappearance, in particular districts, are scarcely explicable on the limited principle of contagion. Sydenham, who referred more to atmospheric changes, than the fashion of modern times will allow, speaks of a "variolous constitution of the air."— My own experience has instructed me that Scarlatina *often* appears, under circumstances which afford neither evidence nor probability of contagious influence. In Dublin, for example, although scarlet fever has not been epidemical for many years, yet solitary and apparently insulated cases of it now and then occur; and what is still more to the purpose, this fever has been observed to break out suddenly and annually in schools, where the dormitories were crowded or ill ventilated, and to disappear altogether, after suitably remedying these errors. But the subject is too large to be discussed in a note, and I forbear citing other evidence of a similar kind.

Some advocates for the above mentioned hypothesis extend the analogy so far as to maintain that Typhus can be expeirenced *once* only by the same individual; an immunity, which does not hold universally, even in the Exanthematous Fevers, and which, in reference to typhus, is contradicted by familiar ex-

advocate of this hypothesis that, "there is great reason to object to the vague and loose application"* of this term; and am willing, as he is, to adhere to the definition of it by Cullen.—But this definition involves the epithet "contagiosus;" a property which Dr. Bancroft would limit, (not according to the definition of Cullen, but according to his own previous hypothesis) to such fevers only as have a contagious *origin*. Contagion, however, being strictly an adjunct, and no part of the morbid catenation of symptoms of typhus, is obviously questionable, if not inadmissible as a basis of nosological classification. It happens besides to be the very matter in dispute; so that until the previous question be determined, it cannot be assumed as a criterion of morbid diagnosis. Nor can Dr. Bancroft derive any aid or countenance from the nosologist to whom he appeals, since Cullen assigns the property of contagion to Typhus, (gravior et mitior) and Synochus, without limit or qualification. It is superfluous to add that neither Dr. Bancroft nor any other advocate of the hypothesis above proposed, has suggested *any morbid character*, by which typhus of contagious origin, may be distinguished from other typhous fevers of spontaneous generation.

perience in the Hospitals of large cities; where not only individuals but families, and the nurses and attendants themselves, (especially if the Hospitals be ill constructed) come a second or third time under review of the Physician, labouring with Typhus.

* Essay on Yellow Fever, page 497.

Having made it my business to enquire into the origin of most cases of Fever that were admitted to the Hardwicke Hospital, during several years, I found the results to point less frequently and precisely to a contagious source than I should have anticipated. The information of the patients or their friends, it is true, was often indistinct, and when positive, was not always to be relied upon. But the scale of enquiry being considerable, the general conclusions from it may be entitled to attention.—First; it appeared, that the fevers defined and denominated by Cullen, typhus gravior, typhus mitior, and synochus, indifferently claimed or disclaimed a contagious origin; and when several members of a family, (the origin of whose fevers might be presumed to be the same), were successively transmitted to the hospital, a specimen of *each* of these kinds, very commonly appeared among them.—Secondly; no peculiarity of symptom or sequel distinguished the fevers which could be traced to contagion, from those which could not be so referred. Yet when whole families were visited with fever, the worst sort of cases were generally to be found in one or more of them.—Thirdly; on comparing the febrile cases, which seemed to arise spontaneously among the inmates of the paupers' buildings, with the cases that were incidentally received into that department from the town, it did not appear that infection was less readily communicated from the former than from the latter subjects. The conti-

nual influx of fresh paupers to the Institution, served doubtles to keep open a channel of infection from without; so that this comparison cannot be deemed decisive of the equivocal generation of contagious fever. The whole evidence, however, may serve to invalidate the supposition of two classes of Typhoid Fevers, the one specifically contagious, the other wholly uncontagious, which could hardly be supposed to prevail concurrently, in so ample a sphere, without some obviously distinctive marks.

The Bedford Asylum, which is attached to the House of Industry, furnished additional evidence to this purpose. The building was originally constructed for *six* hundred children, from the age of five years to adolescence; but was crowded by a gradual accumulation of eleven hundred boys and girls. Notwithstanding the care of the superintendant, epidemic fever appeared continually amongst them. It was surprising how soon and how generally they contracted *petechiæ*, with great failure of strength, a turgid countenance, and considerable stupefaction. If these cases were not quickly transferred to the hospital, the fever spread and its character deteriorated. If on the other hand, the patients were timely removed to cool and ventilated wards, and treated with active purgatives and cold ablution, the fever seldom continued longer than seven days in any case, and hardly ever proved fatal.

Now although the admittance of children caused a frequent communication with the town, yet in other respects the Bedford Asylum was successfully insulated; and as the persons and body-clothing of the children were washed on their first entrance, it is not probable that contagious fever was frequently introduced through that channel. It is presumable besides, that an apparently extrinsic cause of this kind, had it existed, would have been marked by circumstances of individual origin and gradual progress, more definitely than experience testified.

If it be enquired, to what causes the frequent generation of fever may be assigned, amongst children who were well clothed and fed, and lodged in dry chambers, I would reply, that a permanent cause existed in the noxious atmosphere of their crowded dormitories, and an occasional or exciting cause in the vicissitudes of weather. Other causes might concur with these; but that these were efficient causes, has been demonstrated, first, by the fluctuating transmission to the Fever Hospital, corresponding with certain vicissitudes of weather, as formerly noticed; and secondly, by the remarkable fact, that since the numbers of children have been thinned in the Asylum, and their dormitories more effectually ventilated, petechial fevers and even synochus have almost wholly disappeared.*

* The history of other similar Institutions, furnishes corro-

In like manner, a reduction of the number of adult paupers, and a more perfect ventilation of their wards, by day and night, have rendered the appearance of typhus amongst them, of comparatively rare occurrence.—But besides the efficient causes, (just assigned) of the fevers of the Bedford Asylum, other *predisposing* causes at least, prevailed more generally among the adults; as anxiety and depression of mind, watchfulness, and disorder of the digestive organs. To the concurrence of such causes, the generation of fever, whether by contagion or otherwise, is largely indebted; and to their presence or absence is

borating evidence of the facts here stated. It is worthy of remark, that the same circumstances, which tend to the production of typhoid or petechial fevers, in large seminaries of poor children, favour the generation of scarlatina in crowded schools of the more opulent classes. The dietary of the former establishments consists chiefly of farinaceous aliment; that of the latter consists largely of animal food. The lower classes of all ages are undoubtedly more prone to typhous fever than the upper ranks: although the fatality of that disease, when formed, is considerably greater among the rich than the poor.—Doctor Bancroft disclaims the appropriation of the term *typhus*, to "low or slow fevers, arising from great fatigue, "cold, and damp habitations, unwholesome or insufficient "food, anxiety, grief, fear, and other depressing passions and "debilitating causes, which have no connection with contagion." (Essay, page 497). As none of these causes seem to have been implicated in producing the petechial fevers of the Bedford Asylum, and as no proof or probability appears of their *contagious origin*, it is doubtful by what term or charac-

often to be ascribed the contingency of contracting or escaping fever, under external circumstances apparently similar.*

ter they could be designated, consistently with his hypothesis. Such are the difficulties which attend a nosological arrangement, founded on assumed *causes*, whether proximate, remote, or occasional. In truth, the ill success of Riverius, Boerhaave, and Hoffman, in their attempts to establish an *etiological* method of classic distinction, may reasonably discourage all future designs of a similar kind.—Doctor Bancroft will pardon the liberty I have taken in criticising some parts of his Essay; a work which abounds with learning, and indisputable marks of genius.

* Exemplifications of this occur frequently in private families, where the facts may be distinctly traced. An individual member becomes affected with Petechial Fever, without any evidence or even remote probability of its being derived from contagion. If his apartment be well ventilated, the hired nurse, who has no solicitudes that impair the œconomy of her health, incurs little hazard of contracting the like fever. But some near relative, a wife, or a sister, whose alarm and anxiety disturb her rest, destroy her appetite, and derange the geneneral functions of her frame, soon falls into a similar fever, which terminates perhaps fatally. Other members of the family may continue in good health, until some accident of cold, wet, or fatigue, occurring (within a limited time) to some one of them, precipitates him into the like petechial fever, and thus diffuses fresh contagious influence around.—"The fevers, (says "Doctor Haygarth), which are denominated *low*, *nervous*, "*putrid*, *&c.* may possibly be of *different species* or *varieties*. "They may be subject to different laws, in regard to the pe-

This brief digression on the subject of contagion will be excused by those who are aware of the importance of the questions at issue, not only in relation to science, but to the common safety of mankind. It is deeply to be regretted, that such matters should still appear to be involved in the shadow of doubt.

Much confusion, and even apparent contradiction in medical reports of fever, have arisen from the various or uncertain acceptation of the *terms*, used by different writers. The term *synochus*, for example, is of extremely indefinite import. Doctor Cullen's account of it, is hypothetical and vague. "Morbus contagiosus; febris ex synochâ et typho "composita; initio synocha, progressu et versus "finem typhus."—Nosology is neither advanced "nor ascertained by constituting a *genus* of two other assumed *genera*, by defining a contagious fever, for example, as compounded of two other generical fevers, the one contagious, the other uncontagious. The existence of synocha, as a fever strictly idiopathic, may be doubted; but a

"riod during which the infection remains in a latent state "in the body; the quantity of poison required to produce in- "fection; and the proportion of mankind liable to receive the "distemper." Letter to Dr. Percival, on the prevention of infectious fevers, p. 14.

hybrid of the kind here supposed, appears to me to be still less agreeable to fact or analogy.*

Those who are most familiar with the aspect of epidemic fevers, on a large scale, will be least disposed to subdivide them into *genera*. The resemblance or rather the convergency of *typhus mitior*, and *synochus* are at least as palpable as the same relations between *typhus mitior* and *typhus gravior*. Each of these species commences with some inflammatory diathesis or congestion; each may decline with stupor, subdelirium, and death; and the appearances on morbid dissection complete the analogy. They occur, besides, indiscriminately in the same season, the same district, and the same family. Among six persons affected with fever in the same habitation, it is more than pro-

* Synocha, and Synochus, have derivatively the same meaning, differing only in their masculine and feminine terminations. Galen arbitrarily employed the former to designate *imperfect*, and the latter *perfect* continuity.—Linnæus and Sauvages, have followed him in this distinction; but Cullen declining it, involved himself in the embarrassment noticed in the text. Yet his candid and perspicuous mind led him to criticise his own arrangement in the following terms. "I am disposed, (says he) to believe, that the synochus ari-"ses from the same causes as the typhus, and is therefore only "a *variety* of it." First Lines, I. 69. And in his "Synopsis "Nosologiæ," he has the following passage; "inter typhum, et "synochum, limites accuratos ponere non possum; et an re-"verâ, pro diversis *generibus* habenda,——dubito."

bable that a specimen of each form will be exhibited. Neither do the mildest nor the severest species propagate merely their own forms, but rather seem to generate each other promiscuously without any known rule. In truth, the commencement and early stages of each have so many common features of resemblance, as often to elude the discrimination of very experienced observers; at a mature period, indeed, they are very discernible, yet under no circumstances have they appeared to me to lose their common generic character. Of these facts, the Hardwicke Hospital and the extensive Establishment to which it is attached, yield ample illustration. And I shall add only one observation, connected with the foregoing matter, viz. that the gradations or degeneracy from the mildest to the severest type, seemed to depend *principally* (besides the influence of the season) in the early or late removal of the patient from the crowded dormitories of the House, to the ventilated wards of the Hospital.

The leading features of epidemic and contagious fevers are rapid prostration of strength, with sanguineous determination to the head, or other principal organs, attended with frequent pulse, and suspended or disordered secretions. The strong analogy prevailing amongst all fevers of this description, seems to indicate a community of generic character. They differ from fevers

arising from simple local inflammation, in many important particulars; but in none more remarkably than in the sudden failure of mental and voluntary power, and in their uniform tendency to perform a certain cycle of morbid changes, in definite periods.

Typhous fevers, as defined by Cullen, (and illustrated under various synonyms by Willis, Sydenham, Huxham, Pringle, Grant, and many other British and foreign writers), constitute a large proportion of the cases treated in the Fever Hospitals of these Islands. The *genus* may be divided into species and varieties; the *species* being distinguished after the manner of Cullen (*gravior* et *mitior*) by the greater or less accumulation and severity of characteristic symptoms; and *the varieties* being defined by the organ or organs chiefly engaged with congestion or inflammatory disorder. These varieties are referable to each species; as typhus gravior and typhus mitior are alike incident to hepatic, pulmonic, gastric or enteric congestion.*

* Les complications les plus frequentes de la Fievre Typhode ont lieu avec les fievres angeiotenique, gastrique, et muqueuse; avec l'etat adynamique et l'etat ataxique; avec des phlegmasies du cerveau, du poumons, du foie, et des intestins, et avec des flux de ventre." Dict. des Sciences Medicales, tome XV. p. 441.

I am far from being satisfied that this is the best arrangement that could be devised for the purposes of nosology; but experience has instructed me, that it fulfils the chief objects of practical indication.

The worst forms of typhous fever seldom appeared (in the Hardwicke Hospital) in young subjects. In middle aged persons, the most formidable cases were those which had been neglected during the first eight days of the malady, or which occurring in broken constitutions, involved severe organic disease. Fevers which had been preceded by great bodily fatigue and mental anxiety, were uniformly hazardous, observing the *atactic* character of the French nosographers.—But the "fievre typhode ataxique," seldom appeared among the lowest order of labourers; it rather shewed itself among struggling or decayed tradesmen, servants, and artizans. According to general experience, (liable however to some exceptions) the "fievre typhode adynamique," was the disease of the lowest classes; but every class above them, was liable to the former variety of the French writers. Thus it is remarked, by the very ingenious authors of the article *fievre*, in "the Dictionnaire des Sciences Medicales," "that "in an army composed of veteran troops, the "typhus ataxique, is most common to the officers, "and the typhus adynamique, to the soldiers."

Yet raw troops on foreign service, with the solicitudes of new duties, and separation from their families and country, are also apt to experience the atactic kind of fever. Though this distinction of fevers has been little attended to by our writers, and certainly not developed with the care which it deserves, yet it may be proved from various evidence, that mental anxiety, disturbance or depression of the animal spirits, give to fevers, through the sensorium, a peculiar character, which is always attended with much danger.—The worst symptoms of fever are pervigilium, tympany, singultus, coma; the most favourable in all cases are sleep, a moist tongue, and solvent bowels. The appearance of the alvine evacuations affords a good index of the state of the larger secerning viscera. The quality of the urine is too variable to place any dependance upon it; but its quantity is an indication of some import, in the advanced stages of fever, when a deficiency of this discharge is an unfavourable sign, and its suppression, very commonly, a fatal one.—The state of the pulse has appeared to me a much less uniform or satisfactory criterion than it has usually been esteemed, except when it manifestly indicates inflammation, or the near approach of death.—The appearance of petechiæ, is still less subservient to prognosis; yet, when their first eruption occurs at an advanced stage of the fever, under a cool and purgative treatment, they undoubt-

edly proclaim danger. The countenance and posture of the patient, his manner of respiration, and the appearance of his tongue, give various and authentic information to the experienced practitioner. When the patient lies at ease on his side, and especially if he is observed to relieve himself by spontaneous changes of position, after the fever is much advanced, the augury is favourable; on the contrary, when he continues extended and supine, lethargic and muttering, the prognostic is adverse. But the tongue is perhaps the most accurate informant of the state and progress of the fever; as it indicates the condition of the whole intestinal canal, and of those visceral organs, which hold so remarkable a sympathy with the brain.

The *duration* of typhus gravior, as it appeared in the Hardwicke Hospital, seldom fell short of fourteen days and not unfrequently exceeded seventeen; unless a fatal termination intervened. The *crisis* was commonly marked with distinctness; and, if I mistake not, the term of convalescence was lengthened or shortened in proportion as the crisis was fully or obscurely formed.—The most favourable crisis was attended with deep sleep, protracted sometimes for the space of forty or fifty hours, with brief intervals. This sleep was very distinguishable from comatous slumber. If the patient could bear to be awakened from it

without shewing signs of confusion or perturbation; if a general though moderate diaphoresis prevailed; and if the excretions improved in their appearance, a favourable change was established. But this, which appeared to me the most salutary crisis, was not the most common. The critical period was often a scene of severe struggle, the issue of which was for many hours doubtful. An obscure rigour would set in on the eve of the fourteenth day or later: delirium and jactitation would encrease, the extremities become cold, respiration hurried and oppressed, the countenance pale and anxious, and the pulse by its frequency, smallness and irregularity, scarcely numerable. The patient would often moan loudly from pains referred by him to the bones of his back and limbs. This struggle usually increased for some hours, and then subsided into relief or the gradual extinction of life.* It deserves remark that these critical

* There is a very remarkable analogy between the "perturbatio critica" of fevers of type, and the critical conversion of phlegmonous fever into suppuration. Doctor Grant refers both to a common principle of *coction*; a doctrine derived remotely from the antients, and deserving of more attention than some recent theories, which have been supposed to supersede it. Undoubtedly the critical struggle, when it occurs in Epidemic Fevers, is commonly the precursor of that readjustment of visceral action and secretion, which determine just health; yet, (as I have observed above), the tranquil crisis of sleep with moderate but general diaphoresis, has appeared a more

efforts were usually at their acme, in that period of the night when the invasions of gout, asthma, epilepsy, and many other diseases, commonly take place. Hæmorrhagy from the nose, occurring previously to the crisis, was almost always a favourable sign. A spontaneous diarrhœa was equivocal, unless the bowels had been previously constipated. General sweats with free urine were good signs; but it appeared to me immaterial whether an albuminous deposit occurred or not, in the latter evacuation.

With regard to the critical days, my experience coincides with the facts which were observed by Hippocrates, and which have been repeated, with

favourable antecedent of these salutary changes. This apparent incongruity, however, may in some degree, be explained, by the tenor of my practice in Fever bearing mainly, even from the commencement, on the control, relief, and adjustment of the secretory organs; so that the struggle of *coction* which has been more uniformly experienced by other practitioners, may have been thus frequently anticipated and prevented.—And I am the more disposed to draw this conclusion, because Sydenham, in his excessive solicitude to provide for critical evacuations, suspended the use of all evacuants after the *tenth* day of fever, "taking care to keep his patient *costive*;" and prescribing "warm and cordial drinks more liberally, in order to promote coction."

due qualifications, by almost every writer on fever since his time.*

The period of *convalescence* in typhus gravior, I found to be very uncertain, depending on the constitutional powers of the patient, and the degree of integrity of his vital organs. As a perfect crisis was very seldom developed, when the lungs, the liver, or the intestinal organs were deeply diseased; so also convalescence was slowly and precariously effected under such circumstances.—Some morbid sequelæ now and then supervened; as œdematous limbs, dropsy, dysenteria mitis, rheumatic pains, cutaneous eruptions, and phthisis. When hydropic affections occurred in feeble subjects after protracted fever, they proved obstinate only in connection with the derangement of some important viscus. Dysentery in the autumnal season, proved troublesome, but not often fatal; if suddenly checked it sometimes turned to dropsy, with inflammatory symptoms. The pains which I have termed rheumatic, (from the want of a more precise denomination) seldom survived the fever longer than a week; yet in a few cases they continued to harrass the patient many months, with progressive emaciation. Of the cutaneous

* Some valuable documents on this subject will be found in Dr. Stoker's "Treatise on Fever," and the same subject is very ably treated in the "Dictionnaire des Sciences Medicales"—art. *crisis*.

eruptions, which were chiefly of the papulous kind, the most troublesome were those which happened to patients previously infected with itch; in whom the disease was apt to assume the aggravated form of scabies purulenta.

Relapses were extremely rare in the Hardwicke Hospital. They were sometimes threatened by errors or excess of diet; as when a patient's clamorous importunity for food prevailed too soon for the allowance of full diet, or tempted him to consume portions of food left by other patients in addition to his own share. In such cases an emetic followed by a gentle purgative usually restored convalescence. But relapses of a more serious kind occurred sometimes after imperfect crises, in in circumstances of visceral disease.

The most common period of *mortality* was between the eleventh and seventeenth days. It occurred earlier in cases which had been neglected at their commencement, and later in those which had the benefit of remedial treatment from the outset, or within the first five days of the fever.

I have superintended numerous morbid *dissections* of patients who have died in typhous fever. The examination was almost uniformly made within twenty four hours after the death of the subject. In typhus with sub-delirium and

comatous affection, the brain exhibited on inspection all the usual marks of vascular congestion. These were not less observable in cases which had run a short course, than in others which were more protracted. On removing the upper part of the cranium, blood was frequently effused. The vessels of the pia mater and plexus choroides were often turgid, and the capillaries occupied with blood; a glairy fluid, sometimes tinged with blood, was interposed between this membrane and the arachnoid tunic. Globules of air appeared often in great abundance in the vessels of the pia mater, which were easily ruptured in any part of their ramifications. More or less of serous effusion was found in the ventricles, yet seldom in any considerable volume. The substance of the brain was in some cases firmer, in others softer, than natural. On dividing its substance, numerous bloody points usually presented themselves on the surface of the separated parts.—No case of abscess of the brain (as described by Pringle and others) occurred to my observation.

The phenomena here specified are in strict correspondence with the symptoms of typhus gravior, especially towards its decline, and elucidate the common termination of the disease in the manner of apoplexy. In many fatal cases of petechial fever, however, the brain exhibited very slight evidence of sanguineous congestion. But these

cases had been slightly marked in their progress by delirium and not at all by coma.

In almost every case, whether of mild or malignant typhus, one or other of the following organs were also found engaged with disease; the lungs, the pleura, the liver, the peritoneum, the mucous or villous texture of the intestinal canal.

The morbid appearances of the lungs, in such cases as had antecedently shewn symptoms of pulmonic inflammation, resembled those which are exhibited after peripneumonia notha; viz. sanguineous congestion of one or more entire lobes, with mucous and purulent engorgement of the bronchiæ, a florid hue of the entire pleura of one or both cavities, with serous effusion, coagula, and recent adhæsions. Sometimes the lungs were found studded with abscesses, or tubercles in various stages of advancement to suppuration.

The liver was frequently * diseased, especially in the summer and autumnal fevers. In such cases it was generally found soft or irregular in its texture, dark, yet sometimes mottled in its colour; its vessels gorged with blood, and with grumous rather than bilious secretion. Sometimes the in-

* The frequent appearance of diseased liver among the patients of the Hardwicke Hospital may be accounted for, by the number of decayed drunkards in the Pauper's Buildings, which were *then* much visited with petechial fever.

vesting membrane was inflamed, with adhæsions to the adjacent parts. The gall bladder was in some cases distended with green or black bile; in others it was found empty. The peritonœum, in cases of antecedent tympany, exhibited a diffused blush of preternatural rednesss; the intestinal portion, in some enteritic cases, was marked with circumscribed patches of a more livid hue, accompanied with adhæsions more or less extensive, throughout the viscera. The abdominal sac, under these circumstances, always contained some serous fluid, from the quantity of a pint, to that of two or more quarts with filmy coagula. The inner membrane of the intestinal canal was found variously diseased, from the mucous tissue of the fauces, to the opposite alvine extremity. Portions of florid congestion, or livid patches of disorganized texture, were occasionally discovered.—Sometimes the membrane was invested with tenacious mucus. In other instances it was preternaturally denuded of this covering; as when dysenteric symptoms had prevailed. The surface of the membrane, in such cases, was partially or generally florid with thin puriform secretion, and scattered spots of a darker hue, with separation of texture. Ulcerations were very seldom observed except in cases of confirmed dysentery.

These morbid appearances presented themselves separately, or conjointly, or in various modes or

combination, in the fevers of every season. For as each period of the year afforded examples of the several modifications of epidemic fever, the dissections also yielded corresponding evidence of these varieties. Yet a vein of predominance was observable in each season. Thus pulmonic disorganization was chiefly detected in spring; gastric derangement in the summer; hepatic and enteric disorder in the autumn, and cerebral congestion in the winter. It may not be amiss, however, again to urge a practical caution against confiding in these precarious distinctions of season. Each case of fever, as it occurs, must be regarded implicitly according to the symptoms which it presents; and if the case prove fatal the eventual information derived from dissection will be found to confirm the prudence of this injunction.

It must be candidly acknowledged, that the light of morbid anatomy has, strictly speaking, discovered few points in the essential pathology of fever. It has served, indeed, to illustrate and verify some important conclusions of antecedent sagacity, and has thereby tended to fix the fluctuating opinions of theoretical practitioners. But whoever will be at the pains to compare the practical views of fever entertained by Sydenham, (who had little if any diligent recourse to morbid dissection) with the opinions inculcated by successive writers on fever to the present times, will be

satisfied of the truth of this observation. The minor revolutions of doctrine respecting putridity, spasm, asthenia, inirritability, &c. have had their fashion, and merited decay. But the bulk of wise practitioners have all along adhered to the evidence of their experience; and have left the speculative part to contend for the palm of inventive ingenuity. If later physicians have been more diligent than their predecessors in the department of morbid anatomy, the benefit accruing from their labours has been rather the correction and adjustment, than the discovery, of practical knowledge. Observation having confirmed what analogy suggested, and familiar facts having been authenticated, and in some degree explained, by organic appearances, the science of fever, though not greatly enlarged, rests undoubtedly on a more solid basis than at any former period.

The design of an Hospital Report, precludes theoretical discussions, and perhaps the science of medicine is hardly yet sufficiently advanced to compass the pathology of fever. Much collective light has been thrown upon it by the humoral theories of the older writers, the vascular spasm or atony of Hoffman, the doctrine of morbid associations by Darwin, of local inflammation by Ploucquet, and of morbid temperature by Currie. That the labours of these distinguished men have

furnished many solid, and some highly wrought materials for the structure of febrile Pathology cannot be questioned; nor will the physician, who is at all versed in the difficulties of the task, refuse the tribute of his admiration to each of these scientific artists. Yet to select, assemble, and give cohæsion to the valuable parts of their several fabrics, to supply radical deficiencies, and render the whole consistent and symetrical, will perhaps demand still higher powers of scientific genius.

What has hitherto retarded the advancement of this work, has been not so much a propensity to generalize, which belongs to all philosophic minds, as an eagerness to abandon old doctrines, whenever new ones have been projected, and to rely too exclusively upon each, for a solution of all the various phenomena of fever. Thus the humoral pathologists slighted the Hippocratic precepts concerning morbid temperature; and in turn, the humoral theory, though pregnant with the most important doctrines of the œconomy of secretion, was rejected for neurological hypotheses of debility and spasm. Organic disease was thus in a great measure overlooked, until the doctrines of morbid heat, and local congestion or inflammation, again brought this important feature into notice. But there is now danger, that on discarding the cycles and the epicycles of fever delinea-

ted by Cullen or Darwin, the doctrines of morbid catenation, or associate actions of disease, will be at the same time, fatally overlooked.

The French nosographers, who have not been slow to cultivate the morbid anatomy of Fever, or to employ their information to illustrate the pathology of this class of diseases, have concurred with our own writers in acknowledging its various desiderata. M. Pinel justly enquires, "mais peut-on "rendre raison de leurs phénomenes, et en re- "trouver le mécanisme dans la structure, et la dis- "position des pricipales parties que paroissent en "être le siége, ou dans la nature des fonctions or- "ganiques de ces parties dans l'état de santé?— "Quelle connexion ont les causes occasionelles, "physiques ou morales, avec cette augmentation, "d'irritabilite febrile dans l'estomac ou le duode- "num, ou dans les conduits ou reservoirs biliaires "ou pencreatiques? Les humeurs secrétées, jou- "ent-elles dans ces maladies un role primitif ou "secondaire?"*—In another place, M. Pinel gives the ample praise which is due to Plenciz, Rœderer, and Wagler,† for their minute attention, not merely to the physical changes attendant on fevers, but to all the incidental circumstances, ex-

* Nosog. Phil. tome 1. p. 89. 94. † Jos. Plenciz, Acta et Observata Medica.—Wagler Tractatus de Morbo Mucoso. Goeting, 1783.

ternal and internal, which occur to form the disease.

I have already noticed the uncertain and often fallacious information of the *Pulse* in this class of fevers. Extreme frequency fluctuation and compressibility may result from the presence of acrid secretions and tough mucus in the stomach, the effusion of morbidly concocted bile, or the accumulation of indigested aliment and vitiated humours in the intestinal canal. An erect posture of the body, for the space of a few minutes, may induce the same characters of the pulse; restlessness, pervigilium, the presence of too much light, heat, or noise in the patient's room, may produce similar effects. The tendency to vascular excitement, besides, is extremely variable in different subjects; and perhaps the expressions of it by the pulse are as various. Many cases of typhus have occurred to me in which the pulse did not exceed ninety strokes in a minute, at any period when I have made the examination. In several instances the pulse preserved its healthy standard; and in three cases, of which I have clinical notes, it fell below forty-five from the first week of the fever, until convalescence was established. "In low fevers, (says Heberden,) the pulse will often continue below 100 or even 90, and yet the distemper be attended with want of sleep, deliriousness, restlessness, a parched tongue, and end in death, without any comatous or lethargic appearances. A good

pulse, (which I have known in comatous fevers,) with deliriousness, rapid loss of appetite, &c. &c. would afford very little hope and a bad one, without any of these might be harmless."* The worst kind of pulse in typhus is that in which the artery is very slightly contracted, so as to give the impression of equable and permanent dilation; which is often attended with a certain rigidity in the muscular coat of the artery, yielding a sensation of wiriness. This phenomenon occurs at the latter end of fevers, or when the surface and extremities of the body are cold from defective energy of the heart and arteries. A warm diaphoresis often resolves this muscular rigidity, and restores the undulating character of the pulse.

Of the appearances of the *tongue* in typhus, the following deserve distinct attention. First, it may be moist and thinly coated with white mucus as in the febrile phlegmasiæ; in which case the pulse is usually strong, the temperature of the body high, and some viscus engaged in inflammatory action.—Secondly, when the tongue is thickly covered with yellowish mucus, the skin is also generally suffused with a similar tinge; the epigastrium is tumid, and the hepatic viscus in a state of congestion. Thirdly, a brown dry streak in the middle of the tongue indicates intestinal torpor and defective secretion throughout the canal.—

* See "Heberden's Remarks on the Pulse."

Fourthly, a tremulous tongue betrays debility with sensorial disturbance.—Fifthly, a dark, dry and shrunk tongue, with difficulty protruded beyond the teeth, indicates a deeply vitiated condition of the secretory organs, with extreme prostration of forces both animal and vital. I have not been able to ascertain that it indicates any peculiar change in the condition of the blood. Although venæsection is rarely practised with advantage under these circumstances, yet a spontaneous hæmorrhagy, especially from the nose, is often salutary. A copious exhalation from the capillaries tends to the like relief.—Sixthly, the tongue has sometimes a highly florid hue, with eminent papillæ. This obtains chiefly when the fever has become hectical from suppurating surfaces or abscesses, as when dysenteric disease is formed.—Seventhly, the tongue often becomes swelled and partially shining in the advanced stages of typhus. The middle of the organ, on its upper surface, is occupied by a dark dry or rough streak; but the edges and the inferior part are puffed out and flaccid. I am at a loss to account for this latter circumstance, or to specify any indication of this state of the tongue, different from that just noticed in the fifth variety of its morbid appearances.

It is justly observed, by Doctor William Fordyce, that "The different appearances of the tongue in fevers ascertain the state of the disease, its nature, and the proper mode of treating

it, better than the pulse itself." In truth the information afforded by that organ, to an experienced practitioner, is at once so various and accurate, as to claim his primary attention and reliance.

Of *petechial eruptions*, there are several kinds. Some are of a pale colour, indistinctly circumscribed, and often confluent. They are scattered on the breast, shoulders, and trunk, in the same manner as the morbillous eruption, but without elevation of the cuticle or eventual desquamation. This kind I have seen as early as the second day of the fever, and so far as I have observed, its first appearance is not often later than the fifth day. The eruption declines at irregular periods; but a cool and purgative treatment often banishes it in forty-eight hours.—Another kind of petechiæ is the crimson or violet puncta, resembling flea bites, of minute but circumscribed form, and distinct from each other. I do not remember to have observed these ecchymoses earlier than the third day of fever, and when they occur thus early, (as in patients who have been confined to a close and heated atmosphere, and whose bowels are constipated), they disappear rapidly in the cool wards and ordinary discipline of an hospital, although the fever itself may observe a protracted period.—These purple stigmata are of very frequent occurrence, and are seen on almost every external part of the body; though I have never detected them

on the face, the palms of the hands, or the soles of the feet. Their hue grows paler as they become gradually evanescent. The large purple blotch was seldom seen in the Hardwicke Hospital, except in such cases as were admitted in an extreme stage of fever. Vibices were also of rare occurrence, and marked a formidable state of the disease.—None of these petechial appearances present an elevation of the cuticle. But besides these a papulous or miliary eruption often occurs, and becomes diffused over the trunk. Its colour is scarcely discernible from that of the skin, so that the eye does not always detect the efflorescence; but on exploring with the hand, a rough sandy surface is perceptible. These several kinds of eruption may occur simultaneously in the same case.—Indeed the last-mentioned seldom if ever appears alone in typhus. What specific circumstances determine their respective appearance, I am unable to conjecture. It is justly observed by Pringle, that "they are never critical;"* they are cherished and multiplied by foul air, external heat,

*See "Observations &c." Part III. Chap. 7.—Burserius, in his Institutes, (see his learned chapter on this subject,) distinguishes petechiæ into four kinds, primary and secondary, critical and symptomatic. In this division he has been followed by several Continental writers. I freely confess my inability to follow arrangements so intricate and artificial, and so much at variance with the course of my own observations. I apprehend that they are relics of the obscurer humoral doctrines.

and internal constipation; and they are dissipated or restrained by an opposite method of treatment.† Nevertheless dark spots or blotches, irregularly circumscribed, sometimes, appear under the coolest regimen, and are then always an adverse omen. It may here be noticed that I have witnessed an epidemic febricula, attended with petechiæ on the second or third day, with the ordinary symptoms of fever so slightly formed, as to require neither medicines nor confinement. * In truth, the appearance of Petechiæ, with or without fever, is hitherto unexplained. The common theory of inflammation throws as little light on these phenomena, as the obscurer doctrine of putrescence. The ecchymosis itself seems to proceed from a disturbed balance of the venous and arterious systems; from a laxity of the subcutaneous capillary veins, and defective absorbent power of the capillary arteries.

The following Table represents a numerical statement of the Cases of epidemic and contagious fever, which devolved upon my care in the Hardwicke Hospital, from the month of November, 1813, to the same month in the following year.—This period affords, I believe, a fair specimen of the whole of my experience in that Hospital:—

† "Regimine paulo calidiore Petechiæ sæpius efflorescunt."—"Sanguinis contemperatione maculas purpureas vidi sublatas." Syd. Sec. III. Cap. II. Sched. monit.

* See "Dublin Hospital Reports, &c." Vol. I. p. 213.

It has been selected as that in which my intelligent clinical clerks, (Doctor Reid and Doctor Charles Orpen,) assisted me to preserve Reports, and to reduce them to a tabular form. I had classed the fevers, at that period, under the titles of Typhus, Synochus, and Febricula ; an arrangement, which, though it be liable to many theoretical objections, will be sufficiently plain and intelligible to my readers. I have already adverted to the subject of nosological arrangements ; and ventured to express my diffidence in those which have hitherto been promulgated in relation to Fever. In adhering to the classification, or at least to the terms, adopted by Cullen, I have aimed chiefly at simplicity and perspicuity ; objects, which some modern writers, and the French nosographers especially, have sacrificed to the vanity of inventing new and complex nomenclatures.

The first column A. specifies the number of admissions in each month. The second column D. represents the number of deaths ; the Third, entitled Remarks, points out the contingent varieties, or adjuncts of Fever. Of 289 patients in Typhus 24 died ; of 362 in Synochus, 6 died ; and of 122 cases of Febricula, 2 died ; of which last one died in an epileptic fit, and the other sunk eventually under chronic Diarrhœa. The total admissions were 770 ; the total deaths 32 ; or one in twenty-four.

Curative Treatment.

ALTHOUGH the art of Physic affords various means, by which patients may be conducted with safety through Typhus or Synochus; and though examples are not rare of persons surviving such fevers, under an entire neglect of remedial treatment;* yet whoever is acquainted with the formidable *sequelæ* incident to these diseases, or the vitiated and irreparably broken constitutions which abound in large towns, where epidemic fevers chiefly prevail, will be satisfied that the mere preservation of life is not the only object of medical skill in such disorders, nor the only essential point of contrast, between the various curative methods recommended by discordant authorities. That sceptical indifference which slights the comparative pretensions of dissimilar modes of treatment, even on the ground of their correspondence in

* It has appeared from Bills of Mortality, that in places where Typhous fever has been suffered to commit its ravages with little or no control from medical treatment, one fourth and even one third of those afflicted by it, have died; whereas the Registries of different Fever Hospitals prove, that under due remedial management, one tenth, and sometimes one twentieth only of the cases terminate fatally.—Happily for these islands, the treatment of epidemic fevers was early ascertained by Sydenham and Willis. In the following age it received some improvements, blended however with corruptions, which have long retarded its maturity, and which a stricter analysis, and a more careful study of the early writers, will most effectually expel.

some leading features, will be found to arise from want of experience or want of discrimination. Its origin may be traced, to those confused notions of fever which represent it as wearing always nearly the same aspect, and therefore requiring in every case a sort of average of plan of discipline, rather than demanding recurrence to certain definite principles, to determine the modes of treatment proper for each variety of the disease. Had this latter canon of medical practice been more carefully observed, physicians would have been seldomer betrayed, either into the scepticism just alluded to, or into the opposite extreme of an eager solicitude to exalt particular remedies into the reputation of universal or indiscriminate efficacy.

From what has been said in the foregoing part of this paper, of the diversified and ever varying modifications of epidemic fever in these countries, it will be apparent that no precise rules of curative treatment can be laid down, otherwise than in reference to the particular modes of the disease. —A detail of cases is incompatible with my present design; nor does it appear to me on the whole, the most instructive method of an Hospital Report, upon a large scale; whose results should bear a nearer analogy to the principles or conclusions of a well furnished medical judgment.

The *first* point to be attended to, for the cure of typhous fever, and the prevention of contagion,

is a plentiful supply of cool and fresh air. "No cordial (says Heberden) is so reviving as fresh air." It is one of the most powerful auxiliaries, in tempering morbid heat, allaying irritation, banishing petechiæ, and promoting sleep and moderate diaphoresis. The wards of the Hardwicke Hospital are admirably fitted for constant and equal ventilation; and I have little hesitation in asserting that the benefit of cool and pure air, to patients who are removed from crowded and noisome habitations, is one of the most decisive instruments of their cure. It is a remarkable fact mentioned by Hippocrates, in the second book of his *Epidemics*, (sect. 1.) that "in the violent heats of summer, fevers appeared without any sweat, but if a shower of the lightest kind occurred, perspiration broke out in the beginning;" so sensibly was a cooling of the atmosphere felt in the open habitations of a Græcian province.

The next point to be regarded is suitable *evacuation*; and primarily, that of blood-letting; a remedy which has been viewed with so much exaggerated apprehension on the one hand, and such undue or indiscriminate partiality on the other, * as to justify a few special remarks in this place. Many valuable instructions have been scattered,

* These differences of opinion are well stated and balanced, by Dr. Beddoes, in his "Researches on Fever."

by contending authorities, through the pages of modern publications on fever; yet no where perhaps has this subject been more justly apprehended, or more happily illustrated than in the writings of Sydenham, and of his commentator, Dr. Grant.† With some abatement for the hypothetical terms, and what I conceive to be the errors, of their humoral pathology, the precepts inculcated by the former, and the rationale adduced by the latter, (concerning blood-letting in fever) appear to me, among the soundest documents of practice which the records of medicine afford. Had these physicians lived in the present day of improved Physiology, it is more than probable that they would have modified their occult theory of *coction*, by the more intelligible doctrines of organic secretion.

It is obvious, in every case of epidemic fever, that the balance of the vascular œconomy is considerably disturbed; that the secretions are vitiated or suspended; that partial congestion, or local inflammation, obstructs the due exercise of one or several of the more important organs.—Thus the skin, the mucous tissue of the primæ viæ, the brain, the liver, and the lungs, are more

† See "Observations on the nature and cure of Fevers, by William Grant, M. D."

or less engaged with congestion, and respectively deranged in their functions, according to the constitution of the patient, or the reigning epidemic of the season.—To relieve these oppressed viscera, and restore the lost balance of their functions, *evacuants* of various kinds, are the chief remedies; under which title, may justly be comprehended the invaluable remedy of cold affusion, the salutary operation of which, is crowned by diaphoresis and solution of the bowels.—As I have endeavoured in my practice, so I should desire in this Report to view these evacuant remedies, not as rivalling each other in claims of universal benefit, but in reference to their severally appropriate and peculiar uses.

In those forms of typhous fever, occurring especially in the winter and spring, in which the pulmonic organs are primarily engaged with inflammation, (marked by loca lpain, scanty respiration, and other features resembling those of peripneumonia notha), I have used blood-letting freely in any stage; not hesitating to do so, in those extreme cases, which present a bloated and livid countenance, with cold extremities, and where euthanasia is the only benefit that could reasonably be expected from it. In such cases, I have sometimes prolonged life by this means, and in a few instances, I believe, saved it.—But the best and safest period for venæsection, is at the commence-

ment of the disease.* When respiration is obstructed by pain, when cough is suppressed, mu-

* I cannot forbear citing the following passage from a writer, whose merits may have been screened by the mists of some popular theories now nearly dispersed, but whose sagacious judgment appears to me to have anticipated the leading principles of pathology, on which the treatment of fever, and especially the practice of blood-letting, will ultimately be regulated. "In the days of Sydenham, (says Doctor Grant,) there was a difference of opinion with regard to the proper time of bleeding, in fevers attended with turgid matter in the bowels, and where this evacuation was indicated. Sydenham had learned from experience that a seasonable bleeding promoted all the secretions and excretions; that the skin became more moist, the urine more coloured, and that both emetics and cathartics acted with greater ease and effect. The fact is true, and I take the rationale to be as follows.—There is a certain degree of heat and (vascular) motion which constitutes perfect health in any animal, all the common operations of life, make some deviation from this standard.—But while it "does not remain long on either side, all the natural functions are performed well enough for the common purposes of life; and the secretions and excretions proceed as usual, and consequently are insensible, such as the regular constant secretion of saliva, urine, bile, perspiration, &c. But if by any accident, this quantity of heat and motion is encreased or diminished beyond a certain degree, and there continued beyond a certain time, a disagreeable sensation is felt, and some or other of the natural functions are disturbed, or perhaps destroyed; at the same time the secretions and excretions become irregular; some are too much promoted, while others are retarded or stopt.—Thus there is a degree of heat which promotes insensible perspiration to the degree of sweating,

cous secretion suspended, I have bled the patient to the amount of eight, twelve, and even fourteen ounces. Neither delirium, nor petechiæ, hindered the repetition of this remedy on the following day, if decisive relief had not been obtained by the previous bleeding and auxiliary evacuations of the skin, the bronchiæ, and bowels. In young and robust subjects, a second or a third bleeding was often required to subdue manifest inflammation of the lungs; which seemed to commence in the mucous membrane, and if not timely relieved,

and may be called the sweating point, under which a sweat cannot be produced; but what is more surprising, if the heat is pushed far beyond the sweating point, the skin will become harsh and dry, and we never can recall even the natural perspiration, till the heat is reduced below the point that first produced the sweat. The same is true of every gland in the body.—In the beginning of all fevers, there is some degree of spasm, which tempted Hoffman to define a fever, *spasmus universalis*. A seasonable bleeding acts as an antispasmodic in many such cases. I have seen in some fevers a vomiting and purging come on spontaneously immediately after bleeding, that has cleared the whole *primæ viæ* critically. I therefore, from reason and constant experience recommend this observation of Sydenham, that even during the putrid diathesis, when much evacuation is required, in people full of blood, let more or less blood be taken according to the strength and circumstances of the patient, in the first place, and then proceed to other evacuations. Now if this is proper in the season of the putrid diathesis, surely it must be absolutely necessary during the inflammatory one." See Observations on Fever, &c. P. 186,-7,-8, foot-note.

extended itself to the pleura, becoming more obstinate and dangerous in the sequel.—In most cases, however, a single well timed blood-letting, to the amount above mentioned, sufficed to allay pain, and restore easy respiration, especially in the catarrhal epidemic, which quickly resolved itself by expectoration. Mucous secretion being duly formed, I used the lancet with caution in petechial and typhoid fevers. In broken subjects or the advanced stages of such fevers, I found the application of leeches to the chest or side affected, more safe and salutary; and after such depletion, a succession of blisters usually conducted the process of expectoration to a just issue.

Although it be a good general maxim, to bleed, rather than refrain from it in questionable cases of acute fever; and although the pulmonic organs demand peculiarly prompt and decisive measures of relief, when engaged with inflammation; yet many cases, especially of typhus, occur, in which pulmonic congestion is simulated, (if I may use such a phrase) when hurried circulation with great debility are the true causes of scanty and laboured respiration. These I apprehend are the fevers in which Doctor Currie practised the cold affusion with so much success, as led him to form expectations somewhat too sanguine of its efficacy in the several varieties of peripneumonic typhus. In doubtful cases I have examined the manner in

which the patient respires, whether by depressing the diaphragm alone, or by elevating the chest conjointly, and whether by a slow effort he can inflate the organ fully without pain or soreness. —In pulmonic and pleuritic inflammation, the former is observed; in pseudo peripneumony, although the elevation of the thorax and abdomen be inconsiderable, yet the movement is simultaneous. I would not deny that some degree of congestion may obtain even in the latter case, or that venæsection may often afford relief; but the tenor of my experience has instructed me that blood-letting is not necessary, and that purgatives, with cold or tepid ablution so employed as to produce gentle diaporesis, tend to resolve the fever, without catarrhal sequel.

In typhous fevers, the brain appears to be always more or less considerably engaged with congestion; and in the winter and spring to be frequently involved with pulmonic inflammation.— In this latter variety, I have mentioned the freedom with which I use blood-letting.--For the relief of the head, (when the lungs are disengaged,) I have employed venæsection much more sparingly. The debility attending this form of typhus has appeared to me much greater than in the other case, and the benefit derived from general bleeding considerably more precarious. In this fever the observation of Pringle is verified, "that if the patient be once or twice largely blooded, on the

first symptoms, he will be apt to pass over the second stage, and from a condition little removed from health, his pulse may sink and he may become delirious." I have usually confined myself to the application of leeches to the temples or behind the ears, occasionally opening the temporal artery in urgent or long-neglected cases. But much of my reliance is placed on assiduously sponging the shaved scalp with cold vinegar, or moistening it with æther; fomenting the patients' legs, at the same time, for many successive hours. After free catharsis, or other depletion, I have applied blisters to the nucha and between the scapulæ.

Sometimes, though rarely, symptoms occur resembling phrenitis, acute pains darting through the head, unremitting vigilant delirium, or delirium ferox, with intolerance of light and wiry pulse. In these cases I have used blood-letting more freely, to the amount of twelve or even sixteen ounces; yet the subjects of this disorder, even in its first stage, sink so rapidly under large bleedings, that much discernment is requisite to adjust the measure of this evacuation. It is particularly necessary, to distinguish this fever from *delirium tremens*, consequent upon the long continued abuse of spirituous liquors, which seldom requires, or well bears, any general depletion of blood.

In the typhous epidemic of summer, attended

with morbid secretions of the abdominal viscera, a high temperature of the body, and little disturbance of the respiratory organs, I have followed conjointly the practice of Doctor Currie and Doctor Hamilton. Cold affusion or ablution, followed by purgatives, have appeared to me to supersede the use of the lancet, in the great bulk of these cases.

Sometimes, however, pain of the stomach with soreness on pressure, frequent retching or dry vomiting, demand bloodletting, especially in the first stages of the fever. Even a feeble thready pulse has not deterred me from taking away twelve or fourteen ounces of blood, which is usually as much as the patient will bear without deliquium. In these cases, as in enteritis, there is obstipation of the bowels, which it is vain to hope to subdue, without first allaying inflammatory irritation.—Drastic purgatives are seldom borne on the stomach, and tend rather to aggravate the local mischief, when prematurely employed. In the Summer epidemics which have fallen under my observation, these severe cases were uncommon, especially among hospital patients.*

* One of my colleagues in the Hardwicke Hospital, Dr. Cheyne, has given a valuable Report of an epidemic fever attended with much gastric inflammation, which appeared in the Summer of 1816. See Dublin Hospital Reports, and Communications in Medicine and Surgery."

As the autumnal season advanced, the intestinal canal, rather than the stomach, became the seat of febrile irritation; and in these cases, mutatis mutandis, my practice in the milder and the severer cases respectively, has been similar to that just mentioned of the summer epidemic. In both varieties of fever, the mucous tissue appears to be the primary seat of congestion or inflammation. Yet the bowels yield more readily in the cases of enteric, than of gastric irritation. The dysenteric fever of Sydenham, the mucous fever of the French writers, and the bilious fever of our popular authors, is seldom attended with acute or fixed pain in the bowels, or any extreme degree of constipation. When such symptoms occur, the lancet is undoubtedly a sheet anchor. As an auxiliary to visceral depletion, it is also useful, when the liver appears tumid and tender. But in the common course of my practice in this fever in the Hardwicke Hospital, I did not resort to venæsection, as the urgent symptoms just mentioned did not usually present themselves. I would by no means depreciate the efficacy of this remedy in other hands; especially when the auxiliaries on which I lay much stress, are not, or cannot be, brought into use. In some cases of dysenteric *

* The true or idiopathic Dysentery was of rare occurrence in the Hardwicke Hospital, during the years 1813, 1814, and 1815.

sequelæ, I have regretted that I did not use the lancet more freely; for though such sequels are undoubtedly incident to cases that have been treated with frequent venæsection, yet, on reviewing my cases, and comparing the practice I then adopted, with my present judgment, I have reason to believe, that I erred on the side of caution in the use of the lancet on several occasions.

The pulse, except in extreme cases, affords little definite guidance in this part of the practice in fever; for whilst the positive evidences of strength and frequency of pulsation, may sometimes confirm the propriety of bleeding, yet an opposite condition of the pulse, (which happens also in several acute inflammations) has very little negative weight, against other clearer indications. Neither does the appearance of the blood, however carefully it be drawn from the veins, afford more certain guidance to the practitioner. "Though the blood in this fever, (says Sydenham) generally resembles pleuritic blood, yet it does not well bear repeated bleeding, unless a difficulty of breathing and violent pain in coughing, and other symptoms of this kind, shew the great tendency of this disease to peripneumonia notha."*

* On the whole, my practice of blood-letting, and my experience of its effects in typhous fevers, (the Synocha putris, Hospital, Jail, Malignant and Putrid fever of various writers) correspond I believe essentially with the practice of Sydenham, Pringle, Grant, and several more modern authors.

Writers on fever often mention the effect of a single blood-letting, in cutting short the disease at its commencement. This I have sometimes witnessed, though by no means so frequently as those who employ the lancet in every case of fever, and who insist somewhat too earnestly upon this circumstance, in favour of their practice. Yet from experience of the like efficacy of a purge, a vomit, or cold ablution, I have no doubt that a moderate bleeding, with its usual accompaniment, a dose of purgative medicine, will also serve to extinguish incipient efforts at fever, in similar cases.

The afternoon or evening appears to be the most favourable time for bleeding patients in fever; as it is usually the period of diurnal exacerbation. This rule, however, is not intended to restrain the use of the lancet or of leeches, at any other period of the day, when they are manifestly required. But it may be an useful caution to observe, that the remissions of the morning, do not always furnish a safe guide for the practice of the evening; and further, that strongly marked exacerbations, occur more frequently in the first, than in the second, or third week, of fever.

The admirable practice of *cold affusion and ablution*, recommended by Dr. Currie, was extensively practised in my wards of the Hardwicke

Hospital. The younger patients, who were generally free from visceral disease, and who were admitted to the Hospital within the first three or four days of fever, were treated with cold affusion, which, aided by a few doses of purgative medicine, effected a rapid and almost invariable cure. The patients here alluded to were chiefly from the Bedford Asylum, and were most numerous in the spring and summer seasons. They very early exhibited petechiæ, considerable heat of the surface, flushed countenance, and stupor or drowsiness. As these children, (from about the age of 7 to 15 inclusive) were easily carried from their beds, I had them placed in a large bathing tub, just without the door of the ward, and six gallons of cold water poured from a bucket over their heads and naked bodies. They were then wiped dry, restored to bed, and, a dose of aperient medicine being given them, were left to sleep and perspiration. By thermometrical experiments, I found the heat of the body generally reduced six or eight degrees of Farht. by this process of affusion. Owing perhaps to the coolness and ventilation of the wards, and the light clothing of the patient's, I seldom found the thermometer in the patients mouth, to stand higher than 105°. The cold affusion usually reduced it to 98 degrees, or even lower for the space of a few minutes, when it again rose gradually to 100° ; refreshment,

tranquility, sleep, and general diaphoresis were the attendant results. "The reduction of heat, (says Doctor Beddoes,) is the point of most consequence in continued Fevers; the full accomplishment of which purpose nearly involves the prevention of local inflammation." It is important to add, that this reduction of temperature, whether by cool air, by cold affusion or both together, tends remarkably to promote a solution of the bowels.

The propriety of the general rules laid down by Doctor Currie for the application of the foregoing remedy, was confirmed by my experience; nor have I any thing material to add or abate from them. I would observe only, that patients in proportion to their youth, have appeared to me to shew less remission of febrile symptoms, especially of morbid heat in the forenoon, than those of more advanced age. Consequently I have used the cool affusion more freely with them at all hours of the day, repeating it in many cases, three or four times in the twenty-four hours; "when no sense of chilliness was present, when the heat of the surface was steadily above what is natural, and when there was no general or profuse perspiration." I can also attest the efficacy of this remedy in cutting short initiatory fever; and were I to speak from the course of my own observation, I should determine its efficaciousness, in this respect to, be greater than that of the lancet or of any officinal drugs.

In full grown subjects, the difficulties attending the process of removing them from their beds, against their will, stripping them naked, constraining them to sit in the bathing tubs, and finally drying them, and restoring them to bed, forced me, after several struggles, to relinquish this practice with adults. Perhaps greater perseverance, with an additional supply of nurses, and male assistants for the men, might have conquered these difficulties, and may hereafter enable some of my successors in the hospital, to bring this practice into full operation. In all cases where cold or tepid *ablution* was available, it was employed freely on the trunk or extremities. Vinegar, or vinegar and water in equal proportion, was used for the purpose and applied with a sponge. This remedy is doubtless inferior to affusion, in power and decisiveness of effect; yet as an auxiliary, in reducing morbid heat, in resolving congestion of the lower viscera, promoting rest and cutaneous secretion it is invaluable.*

* As the subject of morbid heat appears to me to engage less notice than it deserves, both in the treatment and the pathology of Fever, I beg leave to transcribe the following passage from the justly esteemed "Medical Reports" of Doctor Currie.---"It was a position of the celebrated Boerhaave, that the morbid heat in Fever, being a symptom only, might therefore be disregarded. But can we suppose that a heat six or seven degrees greater than that of the blood in health, however generated, will not have the most important effects on the system,

Cold affusion, like bleeding, and other remedies, is most efficacious in the first stages of Fever.—"I have indeed often contented myself, (says

and if it stands in the relation of effect to the preceding symptoms, that it will not operate as a cause on those which succeed? doubtless this morbid heat reacts on the vascular system; irritates the spasm of the extreme vessels, and prolonging the increased action of the heart and arteries, establishes a morbid association, which carries on this increased action after the spasm has relaxed, and the heat itself subsided. If a person is confined in a hot room, or in the hot bath, till his heat rises three or four degrees above the natural standard, his pulse will be found of feverish rapidity; wandering pains will soon be felt over the body; languor, lassitude, and at length great debility, will take place, with most of the symptoms of regular fever. It is evident that these symptoms cannot be expected to go off till the inordinate heat is removed; and if the person remain some time in the heated medium, he will find that the inordinate action of the heart and arteries continues after leaving it, and even after his own heat has subsided to its natural standard. This depends on a *principle peculiar to life* to which the name of *habit* or *association* has been given, and which extends its influence to all the *vital phenomena*, whether intellectual or corporeal. In fever, this morbid heat does not arise from the surrounding medium, but from certain motions in the system itself. But however generated, a heat five or six degrees above the natural standard, must be a powerful agent, and it cannot be expected that the diseased actions should subside under so strong a stimulus. The rapidity of the circulation, and the labour of respiration are consequences of a heat of this degree from whatever cause arising, and must continue till the heat is reduced."—See "Med. Rep." Pages 243. 248. 249.

Doctor Currie) with sponging the body all over with tepid vinegar, or vinegar and water from the ninth or tenth day onwards." The palms of the hands, the soles of the feet, and especially the crown of the head, may be bathed with cold vinegar, advantageously, at almost any period of Fever ; as those parts are usually hot and dry, except when general or critical diaphoresis is formed.

The epidemics of warm weather bear and require more assiduous ablution than those of the winter and spring seasons. In the catarrhal fever, when the bronchial defluxion is considerable, the sudden application of cold to the trunk is apt to occasion disturbance of the breathing, with convulsive cough. In those cases of peripneumonic fever, also, which require the free use of the lancet, I have never administered the cold affusion, but have frequently employed the sponge, with benefit ;—Yet excepting such cases of marked inflammation or copious defluxion, the common kind of vernal fevers, with pulmonic oppression, are relieved or cut short, without any hazard, by the affusion of cold water. In typhus, with predominant cerebral affection, the central parts of the body are seldom much above the natural temperature, in cool apartments, where the patient's clothing is light, and his bowels free. But the gastric or mucous fever, is almost invariably at-

tended with excessive heat, thirst, and restlessness; which are allayed by external renfigrants, as by a charm. In some cases of the autumnal fever, attended with a spontaneous flux, or mucous and bloody discharges, the patients' sensibility to cold, especially when applied to the integuments of the belly, is too great to admit even of tepid ablution.—The relations between heat and perspiration are now so well understood, through the ingenious experiments of Doctor Currie, that it were superfluous to say any thing on this subject. I shall add only, as testimony to the sagacity of Doctor Grant, that the doctrine of the sweating point,* was distinctly anticipated by him, in his "Observations on Fever," published in the year 1773.

In all cases of epidemic fever, and in every stage, I have employed either active purgatives, or mild aperients. If a patient was admitted to my wards in the Hardwicke Hospital, in my absence, he was immediately put to bed, and two of the purgative pills in common use were administered to him. A dose of the cathartic mixture was given to him four hours afterwards, and a permanent supply of whey *ad libitum*. By thus pre-

* See page 322 of this Vol. foot-note.

mising alvine evacuation without loss of time,* the cases came under my review in a less ambiguous or complicated aspect; so that I was better able to determine the character of any local distress of which the patient might complain, in his head, chest, or abdomen.

The Hospital purgative pill consisted of a combination of aloes, scammony, ipecacuan and calomel, of each one grain. The usual dose was two of these pills, which excited vomiting when crapula or redundant bile was present, but in general proved purgative only. When the patient's stomach was irritable, or his bowels easily moved, one pill was given at suitable intervals; or a solution of Epsom salts in spear-mint water, acidulated with vitriolic acid. In every case, I aimed at obtaining moderate alvine evacuation, twice or thrice daily.

The purgative mixture, in common use consisted of infusion of senna, with sulphate of magnesia, and tincture of jalap. Besides this draught

* I am far from recommending the practice of purging severely at the commencement of fevers. Some of the worst cases which I have witnessed, have been those of young medical students, who in the eagerness to evacuate their bowels, have brought on hypercatharsis on the second or third day of their fever, with very alarming consequences. The intestinal viscera, so far from being relieved of their congestion, are thus excited to more serious derangement, and removed still further beyond the control of medicine.

and the pill just mentioned, I had frequent recourse to a bolus, consisting of five grains of calomel, and a drachm of electuary of senna. To this I resorted in cases of congestion of the lower viscera, and especially such as from the severity of the symptoms had previously required the use of the lancet, and frequent ablution. In general I employed it, when the tongue was loaded with yellowish mucus, or when it exhibited a dark and shrunk appearance. So long as the stools were unctuous or pitchy, of a black or greenish hue, and either preternaturally fœtid, or unusually inodorous, I allowed no remission of suitable catharsis; to which circumstance I ascribe in a great measure, the rare appearance of that alarming symptom, a tympanitic distension of the abdomen. Whenever it manifested itself, I endeavoured to stimulate the inner surface of the intestinal canal, by resinous purgatives, administered at each extremity; and in my latter practice I employed the rectified oil of turpentine, with considerable benefit. The dose of this medicine, when taken by the mouth, was from half a drachm to a drachm, rendered emulcent by trituration with sugar, in spear-mint water; the quantity used in a glyster, was from two to four drachms.—In several cases, where peritonitis was apprehended, I applied leeches to the abdomen, followed by a large blistering plaster.

The obvious uses of purgatives are to reduce the mass of circulating fluids, to unload the turgid secretory organs, and discharge the vitiated contents of the alimentary canal. But besides these uses, I am persuaded that important service is rendered by stimulating the mucous membrane of the viscera, and thus diverting congestion of the serous tissue, whether it be of the peritonœum, the pleura, or the pia mater. This subject might be illustrated by citing the efficacy of cathartics in ascites, hydrothorax, hydrocephalus, worm fever, and the fever of maniacal paroxysms.*—Bloodletting and refrigeration are powerful and often indispensable auxiliaries to alvine depletion. In large and airy wards, it is observable, that the patient's bowels are kept solvent, by smaller doses of medicine, than under a heating regimen, and in close apartments. Doctor Grant, lays it down as

* Whilst this paper was revising for the press, I received from my ingenious friend, Doctor Reid, a copy of his recent publication on "Tetanus and Hydrophobia," &c. In explaining the intimate and reciprocal connexion between those parts of the living frame, which belong to the cerebral system, and those which are supplied with nervous energy by the ganglionic system, he makes the following observation; (p. 21). "Hence "derangements in the functions of the latter so frequently ex- "cite diseases in the former, and *vice versa*. There is how- "ever, a very material advantage derived from this circum- "stance, in the treatment of diseases of the cerebral system, "as we are enabled to relieve diseases of that class, by acting "with medicine on the ganglionic viscera."

a canon, in the treatment of fevers, that "Purging is always necessary, and an open body throughout the whole ailment." It may be added, that the old and popular custom in England, of taking purges in the spring and fall of the year, to prevent fevers, serves to confirm the value of this practice.*

Of the use of the *diaphoretic* drugs in the acute stages of typhous fever, I can give but little favorable testimony. When the bowels are confined, the biliary system gorged, and the temperature of the body inordinately high, it is difficult to obtain perspiration at any expence of officinal sudorifics; nor is it, when so obtained, critical or salutary. It is observed by Pringle that "critical sweats are rarely profuse, but gentle, continued, and equally diffused over the body; sometimes, (he adds) the disease will terminate by an almost imperceptible

* The prejudices and timidity of the antient physicians, with respect to purging, appear to have had the most injurious effects upon their practice in fever. Alexander Trallian, observes (in his twelfth book), that "although the antients were "apprehensive of purging in fever, yet he had ventured to "purge in an acute one."—And he further lays down this rule; "when you discover fever to arise from blood, take away "blood in the beginning; but in fevers from bile, purge ra- "ther." Considering the period in which Trallian lived, this sentence alone would distinguish him from the blind followers of antiquity, both before and after his time.

moisture on the skin."* Sydenham wisely directs, in reference to perspiration, that "the patient should have no more nor thicker clothes laid on him, than he usually has when in health, and that no heating medicines should be given to him."— The truth is, that a just cutaneous secretion is to be elicited in fever, by means widely different from those, which in the materia medica, are entitled diaphoretics. Not that these medicines always do harm, but that they are commonly superfluous, when they are not injurious, and serve besides, to divert the practitioner from more important remedial intentions.

On a full trial of antimonials in the several stages of typhus, it appeared to me, that they were serviceable in the first period, only when they proved emetic or purgative; that in small doses, they excited restlessness and anxiety, aggravating the distress of the præcordia, without any contingent benefit. I have seen even profuse sweating obtained by antimonials, whilst the skin remained pungently warm, the fauces dry, and thirst and restlessness unabated. Such sweats neither mitigate the disease nor hasten the crisis. The older authorities proscribe diaphoretics before the eleventh day of Fever; and in this opinion I entirely concur, so far as officinal medicines are concerned. In general I have found, that bleeding, purging,

* "Observations on Fever," &c, Page 301.

and ablution, render them altogether unnecessary in the acute stages.—But in those varieties of fever, which are protracted by imperfect crisis, where the tongue remains coated, and the skin, though temperate, is dry and torpid, I have employed antimonial powder, in small doses, to great advantage. I have usually combined with it calomel or opium, (or both together,) and found them highly serviceable in improving the condition of the secretory organs, and amending the discharges of the liver, the mucous membrane, and the skin. In the dysenteric fever, these remedies are an invaluable resource.

With regard to *vomits*, I have only to observe, that when given on the first or second day of fever, and followed by catharsis, they sometimes cut short the disease, and in most cases mitigated the symptoms, except when gastric irritation was conspicuously predominant. At other periods of fever, when crapula and urgent nausea were present, a draught of warm water or chamomile tea afforded relief. But the exhibition of emetics formed no part of my stated or ordinary practice in the cure of fevers. Now and then during convalescence, a slight accession of fever, threatening relapse, was obviated by an emetic. It must also be noticed, that as the purgative pill contained a proportion of ipecacuan sufficient to excite vomiting, when foul matters were present in the sto-

mach, this served to obviate more formal evacuation.

Cold water, as a drink, is peculiarly grateful in typhous fevers, and should be given under the restrictions pointed out by Doctor Currie. The measure of its consumption I have left rather to the discretion of the patient, than to the periodical exhibition of certain quantities, as recommended by Cælius Aurelianus, and lately revived by a respectable Medical Board. Cold or iced water is always drank eagerly when the fauces are hot and dry ; and a copious draught will often operate like a charm in quenching intestinal ardour, and in exciting cutaneous and intestinal discharge.

Of the use of mineral acids in typhous fever, I have had little experience, from the incompatibility of administering them freely in conjunction with calomel, on which much of my reliance is placed in almost all the worst forms of typhus.—When mercurial and resinous purgatives were prohibited by the irritable state of the patient's stomach or bowels, I have employed the sulphate of magnesia dissolved in infusion of roses, or spearmint water acidulated with vitriolic acid.

The administration of Cinchona in typhous fevers appeared to me to require much discrimination. Whenever pulmonic or hepatic conges-

tion prevailed, when the tongue was loaded with mucus, or dry and shrunk, when the skin was parched, the bowels confined, and the urine scanty, the effects of bark were decidedly injurious. As an antipetechial remedy, I found it useless or hurtful; in some instances aggravating that peculiar symptom; nor did I discover that in any form or preparation, it obviated the appearance of black and spongy gums. I am doubtful if it checked the tendency to gangrene of the nose or extremities of the feet,* or contributed to remove livid blotches, though I gave it very commonly in conjunction with wine, under such circumstances. It may be observed, that during convalescence, the decoction of bark with elixir of vitriol, or tartrite of antimony, was occasionally resorted to with advantage.

Of all *cordials* officinal or dietetic, wine has appeared to me beyond comparison the most salutary in typhous fever. A weak grog (made with whis-

* Gangrenous extremities were extremely rare among my patients. In some cases they were threatened by defective circulation through the lungs or heart; but in general I believe, it will be found they are produced by the transition from excessive morbid heat of the surface and extreme parts, in the early stages of fever, to coldness and torpor in the advanced period. By warm fomentations in the latter circumstances, and by cold or tepid ablution in the former, these vicissitudes are obviated; and there appears to me no ground for the conjecture that the gangrene incident to Typhous fever results from a putrid state of the circulating fluids.

key,) was also used in the Hardwicke Hospital, as an œconomical substitute for wine ; and in aged subjects, or advanced stages of mild fever, when no alarming debility was present, it appeared to serve the purposes intended. As a beverage, it was generally grateful to the patients, and the secretion of urine was promoted by it ; but as a cordial, it was manifestly inferior to port wine, both in power and permanence of effect.

With respect to the administration of wine, (both as to the fit opportunity and measure,) the indications have not always appeared to me clear and certain ; and experience has gradually instructed me to be more circumspect and sparing in its use, than is usually recommended by practitioners. In general, under all the circumstances which indicate cold affusion, viz. morbid heat, a dry skin, loaded bowels, head ache, &c. wine is pernicious ; and in proportion as the opposite of these conditions is established, it may be administered with safety or advantage. The pulse in this, as in several other matters of indication, is a doubtful guide, so that if taken alone its testimony is precarious. Yet in reference to the *effects* of cordial remedies, it affords some useful information ; for if the pulse become more frequent and fluctuating under the use of wine, it may be inferred, that this valuable remedy has been either unduly or unseasonably administered. If on the contrary, the pulse be-

come more regular, soft and slow, within a certain limit, the salutary operation of the cordial may be presumed.—One of the least equivocal criteria of just circulation, is the temperature of the surface and extremities of the body. During the first week of fever, these parts are pungently hot and dry; as the disorder advances, the extremities grow cool and torpid, while the trunk preserves its morbid heat; and a cold clammy sweat often bedews the limbs, when the surface of the abdomen is dry and rigid. It is under these latter circumstances that wine proves beneficial, when just evacuations have been premised.

Those who regard typhus in the aspect of debility or putrescence, place their chief reliance on wine, in the advanced stages of the fever. This in Hospital practice, where patients are often presented for the first time, on the tenth or twelfth day of fever, without previous evacuant discipline, leads to very dangerous errors. Even the indiscriminate use of the lancet is less hazardous. In peripneumonic typhus, wine cannof safely be exhibited at any period, until the local congestion is relieved, the bowels solvent, and the skin rendered moist. The same may be observed of the enteric variety of fever. A technical adherence therefore to the maxim of giving wine after the tenth or eleventh day may be productive of much mischief. From the commencement to the close of

fever, a due regard must be had in each case, to the disturbed balance of the vascular œconomy, to the condition of the principal secerning organs, and to local congestion or inflammation. If a fever be duly treated from its commencement, with evacuations appropriate to the case, wine may be given as the patient begins to fall into a supine posture, with muttering and subsultus. The limit of its exhibition must be determined by its effect, in producing moderate and equal warmth, with superficial moisture, by allaying delirium and jactitation, and promoting tranquil sleep and easy respiration. The lower classes neither bear nor require so much wine as the higher orders; I found half a pint of port wine a sufficient allowance per diem in most cases, and had very rarely occasion to exceed the measure of a pint.

A cordial and aperient drink, recommended to me by Dr. Harvey, was also extensively used in my wards of the Hardwicke Hospital. It was made by fermenting porter wort with barm. Four gallons of the former, and a pound of the latter, put into an open wooden vessel in a warm room, yielded the liquor fit for use in eighteen or twenty four hours. Its flavour is grateful and sub-acid, and the patients consumed one pint of it or more in the course of the day. By adding to each pint, one or two drachms of the tincture of jalap, a cordial and gentle aperient was provided in the form

of diet drink; an object of some importance in dealing with the caprices of sick people in a large scale. This aperient drink I found, in common cases, sufficient to preserve a solvent state of the bowels, after they had been evacuated by more active cathartics. The use of small beer in fever is sanctioned by the authority of Sydenham.* Whether any anteseptic virtues may be ascribed to the fermenting liquor just mentioned, I cannot determine. It appeared rather to hinder flatulency. The adoption of this beverage in typhus suggested itself to Dr. Hervey, by his experience of its efficacy in the disease termed "Petechiæ sine Febre."

Of the use of opium as a cordial, or as a general remedy for typhous fevers, as they occur in *hospital practice*, I have had little experience, and such as to give me no encouragement to extend it. When the belly is costive, the temperature high, and the skin parched, its effects, like those of wine, are decidedly pernicious. On the other hand, when the bowels and skin are solvent, and the body cool, rest, sleep, and diaphoresis, so commonly succeed, in the cases of fever which our Hospitals present, that the use of narcotics is superfluous. Yet there is one variety of fever, termed by the French writers "ataxique," in which pervigilium and jactitation are leading features, from the com-

* Sect. I. c. 4.

mencement to the very crisis of the disorder. Whenever much solicitude, disappointment, or harrassment of mind and body has preceded the attack of fever, these characters are likely to prevail. The lowest or labouring classes of society, who are little addicted to "looking before and after," and whose sufferings are rather animal than mental, seldom fall into this atactic fever. But small tradesmen, and the better sort of servants and artisans, who are more or less engaged in schemes for raising their condition in life, are liable to these symptoms. Among the higher ranks of society, they predominate, and constitute, in my opinion, the most alarming indications of danger. In all such cases opium is an invaluable resource. After the first week of fever has elapsed, and evacuations have been adequately premised, a draught of the camphor mixture, containing fifteen drops of laudanum, may be administered every night, and repeated if necessary, to procure rest, sleep, and gentle diaphoresis. I have always found small doses preferable to large ones; and when they have appeared inefficient, it has been owing to some local congestion, which has not been sufficiently relieved by leeches or aperients. This point of practice I conceive to be of much moment; as the pernicious effects of large doses of opium, especially when the patient is unprepared for them, have occasioned unmerited prejudices against this remedy. Theoretical objections

have been urged against the use of opium in cases where the head is engaged; yet such notions are contradicted by facts, not only in the case of typhus, but of hydrocephalus internus; as appear from the practice of my father, the late Dr. Percival of Manchester, and Doctors Brooke and Cheyne of this city.

Regarding sleep as the most favourable issue of typhus, and observing it to be a common crisis in the fevers of the poor, and rare among the higher classes of society, I have been led to pay attention to this subject, and to form the practical conclusions, just stated.

The efficacy of blistering in typhus remains to be noticed. Like wine and opium, this remedy is seldom admissable, until due evacuations have been premised. After the first week of fever, a blister applied to the nucha, conspires most favourably with cold ablution to the scalp, in relieving pain and tension of the head. In the few cases in which I have directed blisters to the scalp, itself, I have thought them less efficacious than when applied to adjacent parts; besides the objection of their interference with refrigerant applications to the head. A larger vesicatory between the shoulders affords great relief after blood-letting, in peripneumonic fever. It affords speedy relief also in cases of oppressed breathing, in advanced fever, where inflammation is not suspected. Low

delirium, stupor, pervigilium, are indications for the use of blisters, in which I have seldom been disappointed of at least temporary benefit. It deserves to be added, that a blister, when applied on the eve of a critical day, has often appeared to me to determine a favourable change, under very unpromising circumstances. "Blisters (says Fothergile) by keeping up the languid circulation, where the pulse rather grows feeble, and the strength declines, are a noble remedy. A prudent succession of them often does wonders towards the acme of fever," Heberden commends blistering between the scapulæ, as "an almost certain remedy" in this class of fevers.

Synochus.

In a foregoing part of this paper I have stated, that Synochus, according to the arrangements there laid down, and in agreement, if not with the technical order, at least with the fundamental principles of Cullen, belongs to the same genus, as the typhous species and varieties already considered at some length. Much therefore of what has been said on the history and remedial treatment of the latter, is applicable to the former, under certain modifications: for as the synochus non putris, of the older physicians, lapsed almost

imperceptibly into the synochus putris; so the typhus mitior and synochus, of later nosologists, tend by easy gradations to the putrid and malignant forms.

Some diagnosis, however, may be remarked between these converging species. In synochus it never happens that the disease makes so sudden an invasion, with alarming failure of the animal forces, as in most cases of typhus. The heat of the body, and the fullness and strength of the pulse, throughout the course of the disorder, are greater in the former than in the latter. In both species the tongue is coated with vitiated mucus; but in synochus, though a brown streak is observable along its centre, the organ never assumes the dark arid and shrunk appearance, which obtains in the severer species. The bowels are somewhat less torpid, and the secretions less extensively depraved. Some delirium at night is common, but the remissions are considerable, and the organs of external sense are much less generally disordered, or obtused, than in typhus. To these distinctions it may be added, that petechiæ, subsultus and coma belong to the typhoid species.

Synochus is a disease of *all* seasons. The great bulk of fevers in the Hardwicke Hospital, as in other similar institutions, are of this denomination.

They are generally combined with excitement or congestion of some important organ, determined by the epidemic constitution of the season, or the organic predisposition of the individual. The first access of the disorder is often obscurely marked, so as to be mistaken for simple indigestion or catarrh. But the pains of the head are more throbbing, the stomach is more entirely disordered, the heat of the skin and the incipient rigors are more urgent, and above all the lassitude is more immediately oppressive, than in any species of catarrh, except that which has borrowed the name of influenza, and which at certain intervals has been epidemic in these islands.

Synochus is distinguished from fevers symptomatic of local snflammation, by a more sudden or rapid prostration of the animal and mental forces, by the absence or less equable presence of acute pain, even in the organs labouring with congestion, and by the general tendency of the disease to perform a cycle of complicated changes in a definite period. M. Pinel is of opinion, that those who are liable to inflammatory fevers are indisposed to epidemical disease. But this is less certain, than a fact in apparent contradiction to it, viz. that the young, the middle aged, and the robust are chiefly prone to synochus. In such subjects, the disease commences with much general vascular activity, which gives it the angiotenic

character of the French nosographers. In the first access, or sometimes in the first few days of the disorder, it is difficult to determine whether any organ be more especially engaged than another. Some peculiar congestion, however, soon developes itself. During the winter and spring, the thoracic organs are chiefly implicated; in the summer and autumn, the abdominal viscera. Of these organs respectively, the mucous surfaces appear to be, in general, the parts first affected with congestion, which if not soon relieved extends to the adjacent structure, now and then involving the serous membranes in the like inflammatory or subinflammatory disorder.

In the Hardwicke Hospital, the duration of synochus, when it terminated favourably, seldom exceeded nine days; and when the patient was admitted on the second or third day from his attack, it was often extinguished on the seventh. This fever was seldom fatal; except through the disorganization of some important viscus, which either having been previously diseased, fell into rapid dissolution, or being then first excited into morbid actions, protracted them till a fatal termination.

It were superfluous to recapitulate in this place, the morbid appearances, on dissection, of the several organs which are injured or destroyed,

in the fatal cases of this genus of fever. It may be sufficient here to remark; first, with respect to the brain, that I have examined many cases, in which no deviation occurred from the due or ordinary condition of that viscus. In others, there was more or less evidence of sanguineous repletion, though not to the same degree of congestion as in typhus; so that I am doubtful of any appearance of the brain or its membranes, which I have observed in the subjects of proper synochus, could be justly accounted the causes of death. Secondly, the liver though it frequently presented diseased appearances, seldom exhibited abscess or such excessive disorganization, as in the typhous species. Thirdly, the mucous surfaces of the stomach and intestines afforded, under different circumstances, almost every variety of morbid appearance; and lastly, the lungs and pleura, which were most commonly the seat of febrile congestion, yielded no less variety of organic disease.

Three cases of sudden death with convulsions occurred to patients in the Hospital, who were convalescent after mild fever. I could not learn that they had ever been subject to epilepsy. Two of them were young persons, the other middle aged, and each of apparently sound constitution, and at the times of their death free from any febrile symptom. I did not witness their fatal convulsion; but the nurse reported to me, that

two of them died in severe convulsive spasms, which lasted about ten minutes. The other had a fainting fit on going to bed, and after reviving, so as to leave no further solicitude about him, was found dead in his bed on the following morning. On a careful dissection, neither the brain nor any other organ revealed to us the cause of these sudden deaths; and there was no ground to impute them to excess or error of diet.

Lunatics and idiots, of whom I have seen frequent examples in fever, appeared to me to undergo the disease, without any peculiar or aggravated symptom. They are not more delirious than other patients, though more noisy and intractable. As soon as they become convalescent, they are extremely troublesome by their clamorous importunity for food.—It is well known that Hoffman, pursuing a hint of Galen, proposed that lunatics shuold infected with fever, as a probable means of curing their insanity; yet amongst many fortuitous cases, I have not had the good fortune to meet with one in which typhus, synochus, or ephemeral fever tended to any relief of the mental disorder.

Curative Treatment.

The general principles of curative treatment which I adopted in synochus have already been anticipated in a great measure, in the methodus

medendi of the foregoing species. Some circumstances, however, deserve a separate consideration; as this disease, though less alarming in its first aspect, and much less frequently fatal, yet often endangers the permanent health of very important viscera.

The vernal synochus, in which the pulmonic organs are considerably engaged, bears repeated venæsection, and often peremptorily requires it.--- When these marked peripneumonic cases, with topical pains, were admitted into the Hospital within the first three or four days of the fever, bloodletting, with active auxiliary evacuations, often extinguished the disease without any expectorant defluxion. In more advanced cases, when this latter mode of resolution was formed or beginning to establish itself, the lancet was used with more caution, and this distinction was extended generally to those cases of simple catarrhal synochus, which abound in the variable spring and summer weather of this climate. The mucous membrane relieves itself so rapidly in these disorders, that when a full inflation of the lungs can be effected without pain or coughing, a moderate diaphoresis and a solvent condition of the bowels seem to be all that are necessary to the restoration of health.— The clearest indications, therefore, for the use of

the lancet, are derived from the presence of local pain, obstructed respiration, imperfect secretion and defluxion, morbid heat and sthenic pulse; and in proportion as these symptoms disappear, blood-letting is superfluous or injurious.

The summer and autumnal synochus, which is attended with congestion of the mucous and villous tissue of the intestinal canal, with high temperature of the body, and great thirst, demands considerable evacuations. It is well known that the respective advocates for vomiting, sweating, purging, and blood-letting, have severally maintained the decisive efficacy of each measure in extinguishing this fever in the first stage of its formation. Were I to state my own experience, I should remark that I have scarcely seen an instance in which vomiting, not followed by active catharsis, has effectually cut off the febrile disposition. Of sweating, on the plan of cold affusion recommended by Doctor Currie,* and succeeded as it usually is, by an easy solution of the bowels, I have seen the decisive efficacy, in numerous cases of young children, but very seldom in adults. The effects of catharsis alone though strikingly beneficial, are less sudden and conclusive; and the same observation may be applied to the efficacy of blood-letting, so far as my experience has instruct-

* Reports, page 65.

ed me. Out of these powerful resources of art, the intelligent physician will select and combine those which are most appropriate for each case that may be presented to his notice; that is, with a view to the organ or organs which are chiefly engaged, and the obvious collateral circumstances of the disease. The aid which these remedies mutually give to each other should be carefully regarded. It would seem by the facts related of the success attending the exclusive and indiscriminate use of each of them, that they are even capable of performing vicarious offices of relief for each other. But if such methods of practice be thus successful in many cases, how much more general and decisive should be the effects of an unprejudiced choice and discriminate combination?

That form of synochus, which is termed febris gastrica, or febris biliosa, was most frequent in the Hardwicke Hospital, in the summer season. Purgatives, and cold or tepid ablution, were the chief remedies employed in it. A combination of ipecacuan, calomel, and scammony, with doses of neutral salts dissolved in infusion of senna, served this purpose successfully. The heat of the patient's body being generally immoderate required continued ablution, or in the younger subjects, copious affusion of cold water twice or thrice a day. Under this plan of treatment I very rarely witnessed

aphthæ, the most troublesome and formidable symptom of the disease.

M. Pinel, rejects the term "fievre gastrique," in favor of "meningo—gastrique," as more accurately denoting the diseased parts, which characterise this variety of synochus. The inner membrane of the stomach is doubtless the chief seat of irritation; whether that irritation be caused by foreign matters, vitiated humours, or yet remoter principles of fever. The "fievre muqueuse," corresponds also with the synochus biliosa, in which the mucous membrane of the intestinal canal is specially engaged.

Synochus biliosa prevailed, as I have already observed, in the autumnal season. Cases of true Cholera were not frequent. But it often happened that patients were admitted to the Hospital, labouring under bilious diarrhœa with a warm and dry skin, a parched tongue and tremulous debility. In cases of this kind I did not often use the lancet; yet I would by no means arraign, but rather be disposed to make trial of a freer use of this remedy, on the recommendation of some judicious authorities. A combination of castor oil and tincture of opium, which had been long in use in the hospital, for these cases, was found serviceable when the stomach would retain it; vomiting afforded little or no relief, and often aggravated the disorder of

the bowels. Moderate doses of rhubarb with pulv. hydrarg. cum cretâ. during the day time; and Dover's powder, or a pill composed of opium ipecac: and calomel at night, generally restrained the flux in a few days. Sometimes, I had recourse to the decoct. senekæ, adding to each dose of it, twenty or thirty drops of compound spirit of ammonia, and of Hoffman's anodyne. I found limewater with a large proportion of milk, a grateful beverage, which the stomach would generally retain in the worst cases, when all other aliment was rejected. As cutaneous secretion was the most favorable crisis, so it was promoted by moderating the temperature of the extremities when hot, and supplying warm fomentations assiduously, when the surface was cold, and finally by the aid of diaphoretics, such as I have just specified. In many cases in which the visceral organs and their secretions were considerably oppressed, the disorder did not yield until mercury had been freely exhibited; in others, however, in which due evacuations had not been premised, this remedy seemed to increase the fever and local irritation. In every instance it was a necessary caution, to prohibit the patients from leaving their beds, or indulging their appetites with the usual Hospital allowance of full diet, until all symptoms of fever had disappeared.

When bilious vomiting occurred, I at first facili-

tated the operation, with draughts of warm water or chamomile tea, and then resorted to one or other of the following expedients: Ten drops, tinct. opii. in half an ounce of infusion of roses; limewater, with a small addition of milk or cream to conceal the austerity of its taste; saline effervescing draughts; an emollient injection and sometimes a blister or other stimulant applicatiton the pit of the stomach. None of these remedies, however superseded the use of the lancet or of leeches, whenever an inflammatory condition of the villous coat of the stomach or first passages was suspected. Thus, when synochus biliosa commenced with severe retching, and acute pain blood-letting was premised; when on the contrary, the vomiting occurred (for the first time,) at a late period of the fever, with tendency to syncope, and colliquative excretions, opium, wine, and cardiac tinctures in small portions, together with blistering, proved the most efficacious remedies.

That diarrhœa occurs much seldomer in fever, when the patient is under a laxative regimen, than when his bowels are left to their spontaneous efforts, or assisted only by clysters, I think I may assert confidently, from experience. Nor is it at all surprising that a frequent elimination of sordes, along the whole of the intestinal canal, should be the best preservative against such chemical changes

in the matters there secreted, as tend inevitably to irritate or inflame the organic surfaces, and thereby to induce perhaps incurable diarrhœa. A hurried circulation of the blood, for many days, must inevitably produce a corresponding activity in the arterial capillaries, the glands and follicles. As the means which nature has devised for relieving inflammation of the mucous membrane of the fauces and bronchiæ, is catarrhal defluxion, and as art is most efficaciously employed in promoting this expectorating process, so also of the intestinal membrane, and of the glands connected with the digestive organs, their undue excitement, or suspended secretion, are most obviously relieved by such remedies as facilitate evacuations, and restore the secerning functions. Blood-letting, where it is required, is a powerful auxiliary; and in many cases, cannot be omitted with impunity. Acute and locally defined inflammation, if attended with fever, always demands blood-letting. Yet the great bulk of epidemic fevers, especially as they appear in our hospitals, among the lower members of the community, exhibit congestion without the proper features of acute inflammation, unless the meaning of this term be so attenuated as to lose all characteristic import. In these cases, it is still necessary to diminish the mass of circulating fluids, to empty and disembarrass the secerning organs, and to provide a ready exit for

undue or ill connected secretions.—From the days of Hippocrates to the present time, all intelligent writers, who have described the spontaneous crisis of the class of fevers here considered, concur in stating that large fœtid and bilious dejections, or an acrid and inextinguishable diarrhœa, have usually attended the natural termination of the disease; a fact, of no less importance to the pathology and treatment of fever, than the posthumous evidences of morbid dissection.

With respect to the use of cordials in synochus, I have only to remark, that I scarcely ever employed wine in any stage of the fever. The fermenting diet drink already mentioned, was freely used as a laxative and refreshing beverage. In old subjects, or where this drink disagreed with the bowels, I have sometimes substituted the weak punch (whiskey and water) of the Hospital.

The indications and uses of antimony, opium, and bark, in synochus, appear to me similar to those which have already been detailed in reference to typhous fevers.

The Febriculæ specified in the third column of the foregoing table, were apparently ephemeral fevers from constipated bowels, a vitiated atmosphere, variable weather, or such errors of diet, as deranged the impressible system of young subjects.

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Date 1813.	TYPHUS.			SYNOCHUS.			FEBRICULA.			*Total.*	
Months.	A	D	*Remarks.*	A	D	*Remarks.*	A	D	*Remarks.*	A	D
November.	27	2	*One* relapsed. *One* attended with abortion, recovered. *One* with hepatic disease, died.	22		*Seven* with pulmonic affection. *One* hepatic. *One* enteric.	6			55	2
December.	21	2	*One* died a few hours after admission. *One* died after frequent relapses.	42	1	*Three* relapsed. *One* with abortion. *Six* pulmonic. *One* hysterical. *One* followed by dolorcap. remit.	3	2	*One* with catarrhal affection. *One* with Diarrhœa. *One* died in a fit of epilepsy.	76	5
January.	11	2	*Two* Typhomania. *One* Insane Patient. *Two* relapsed.	24		*Six* with catarrhal affection. *One* with jaundice and chronic hepatitis. *One* relapsed.	15		*Four* with catarrhal affection. *One* dropsical.	50	2
February.	22	5	*One* admitted in the last stage. *One* complicated with Pneumonia. *Two* relapsed	18		*Two* relapsed. Several with slight catarrhal affection.	4			44	5
March.	24	2	*One* admitted dying.	32			6			62	2
April.	39	2	*One* Typhomania. *Two* frequent relapses.	25		*One* with with jaundice. *One* relapsed.	6			70	2
May.	15	1	*One* admitted in the last stage with large blotches.	30		*One* with catarrhal affection.	14			59	1
June.	15	1	*One* phrenitic, died suddenly.	21	1	*One* with pulmonic affection, died.	9			45	2
July.	26	1	*One* admitted in the last stage, died.	22		*One* with jaundice. *One* relapsed.	19			66	1
August.	34	2	*One* dysenteria. *One* phrenitis. *One* with Pneumonia. *One* with jaundice. *One* died in convulsions.	40		*One* relapsed.	8			82	2
September.	38	4	*One* admitted dying. *One* died in a very protracted stage. *One* epistaxis.	32	1	*One* died of a rupture of the mesenteric artery, after convalescence.	14			84	5
October.	17	1	*One* died Syphilitic Ulcers.	54	3		8			79	4
Total, - -	289	25		362	6		122	2		770	32

DATE.	HEPATIC.			PULMONIC.			ENTERIC.			MISCELLANEOUS.			TOTAL.	
1813.	A.	D.	REMARKS.	A.	D.	REMARKS.	A.	D.	REMARKS.	A.	D.	REMARKS.	A.	D.
NOV.				3	1	*One* Phthisis Pulmonum died.	2		*One* diarrhœa cum febre. *One* dysenteria mitis.	4	2	*One* old age and intemperance. *One* insane, died three hours after admission—no fever.	9	3
DEC.	2	2	*One* died of Pulmonic, and Hepatic abscesses. *One* of Hepatic atrophy, with symptomatic Fever.	5	1	*Two* Pleuritis. *One* (died) Peripneumonia notha—admitted, livid and moribund.	1		Peritonitis.	6	2	*One* cynanche tonsillaris. *One* rheumatismus *One* (died) extensive syphiliticulcers. *One* died 12 hours after admission. Old age.	14	5
JAN.				20	4	*Nine* Catarrh. epidemic. *Two* peripneumonia typhodes. *Seven* peripneumonia notha. *Two* admitted dying.	1		Dysenteria.	3	1	*One* died worn out by excessive intemperance.	24	5
FEB.	1	1	Hepatitis Dysenteria.	7	1	*Five* Catarrh. Epidem. *One* Peripneumon. notha. *One* died Phthisis Pulmonalis.	3	2	*One* dysenteria hœmorrhœa intestinalis. *One* enteritis hœmorrhœa uteri. *One* colica recovered.				11	4
MAR.				5		*Four* Catarrh. Epidem. *One* Peripneumonia.				3		*One* cynanche tonsillaris. *Two* dolor. capitis.	8	0
APR.				8		*Three* Catarrh. Epidemic. *Four* Pleuritis. *One* peripneumon. notha.	3	1	*One* [died] hepatitis curved spine. *One* dysenteria.	11	4	*One* syphilis-febris hectica, [died]. *One* febricula hectica died. *One* morbilli, pleuritis died. *One* anom. convuls. died.	22	5
MAY.	3		*One*, Hepatitis. *Two*, Hepatitis Chronic.	13	3	*Seven* pleuritis. *One* admitted dying. *Three* peripneum. notha. *Two* catarrhus. *One* pertussis.	8	4	*Two* dysenteria *One* enteritis. *One* marasmus. *Two* admitted dying of enteritis. *One* with strang. hernia.	2		*One* rheumatismus. *One* tertiana febris.	26	7
JUNE				7		*Two* pleuritis. *Three* catarrhus. *One* pertussis. *One* bronchitis.	3	1	*Two* dysenteria. *One* dysenteria erysipelas.	6		*Two* rheumatismus. *One* scarlatina anginosa. *One* erysipelas. *One* morbilli. *One* febris tertiana.	16	1
JULY	1	1	Hepatitis.	9	1	*Five* preumonia. *Three* peripneum. notha. *One* catarrh. febrilis.				4		*One* rheumatismus. *One* hydrocephalus chronicus. *Two* febris symptomatic.	14	2
AUG.				1		Pneumonia.	2	1	Dysenteria.	7	3	*One* died old age, no acute disease. *One* abortus. *One* vomitus. *Two* febris hectica. *One* hydroceph. chronic.	10	4
SEP.	1		Hepatitis Chronica.	4	1	*One* (died) phthisis pulmonum. *Two* pneumonia. *One* peripneum. notha.	1		Enteritis.	2		*One* febris hectica. *One* erysipelas.	8	1
OCT.				3	0	*Two* tussis. *One* pneumonia.	1		Dysenteria.	8	1	*Three* rheumatismus. *Three* febris symptomatic. *One* febris tertiana. *One* dolor. capitis.	8	1
Total.	8	4		85	12		25	9		56	13		174	3

These patients recovered in two, three, or four days; but I generally detained them for a week in the hospital, by way of securing them from relapse. None of these patients (in my recollection) contracted fever by contagion in their intercourse with other patients in the wards.—How far any or all of these cases correspond with the examples, adduced by other writers, of fevers cut short at their commencement by different remedial means, I do not presume to determine. Cool and fresh air, catharsis, and ablution, were the chief antifebrile remedies employed in these cases.

In an early part of this Report, I stated that the Hardwicke Hospital, from its local connection with the House of Industry, received other febrile cases besides those of epidemic and contagious fever.—The annexed Table presents a view of such miscellaneous cases as occurred to my charge, contemporaneously with those specified in the preceding Table.—In accounting for the mortality here recorded, I must again advert to the depraved, broken, and worn out subjects, furnished to the Hospital from the Pauper Asylum.

It appears, from this Table, that scarlet fever, and measles, occurred only in a few scattered cases during the years 1813, 1814 and 1815. The former has not been epidemic in Dublin since the year . The Bedford Asylum, containing above a thousand children, has

been singularly free from exanthematous fevers; yet it has been prolific of synochus and typhus.

Intermittent fevers are also of rare occurrence in Dublin, and generally of mild type. Some relapsed cases of the Walcheren endemic, were admitted to the Hospital from time to time, a few years ago. The disease was treated as chronic hepatitis, with topical bleeding, mercury, a mild diet, and Cinchona when the tongue became clean and moist.

I shall conclude this Report with a Table of the Dietary used in the Hardwicke Fever Hospital.

DIETARY OF THE HARDWICKE HOSPITAL.

	LOW DIET.	MIDDLE DIET.	FULL DIET.
Breakfast.	Flummery, *one Pt.* or White bread, ½ *lb.* new milk, *one pint.*	Stirabout, *one quart.* Buttermilk, *one pint.*	Bread, ½ *pound.* New milk, *one Pt.*
Dinner.	... ...	Soup, *one pint.* Bread, ½ *pound.*	Beef, ½ *lb.* (raw) Bread, ½ *pound.*
Supper.	... ...	Flummery, 1 *Pt.* New milk, 1 *Pt.*	Bread, 4 *ounces.* New milk *one Pt.*

ABSTRACT OF A REGISTRY

KEPT FOR SOME YEARS

IN THE

Lying-in Hospital of Dublin ;

BY

JOSEPH CLARKE, M. D.

HONORARY FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, AND M. R. I. A.

THE Registry, from which the preceding abstract is taken, was kept by my assistants in the hospital, and for the most part under my own inspection. The occurrences of every twenty-four hours were noted daily, at an early hour. Patients who died, labouring under doubtful symptoms, were examined by dissection, whenever permission to do so could be easily procured from their friends.

Of every death and dissection a short note was made in the Registry, generally by myself. Upon the whole, therefore, I am inclined to consider what is here offered to public notice as a collec-

tion of matters of fact, or at least as near an approximation to truth, as the nature of such subjects will permit.

With the view of rendering these facts more useful to the inexperienced, I have subjoined some short practical remarks.—By these means, it is hoped, accurate ideas will be conveyed to the reader, of what actually passed in the hospital, during the period it was entrusted to my care. Having suppressed nothing, my errors may possibly prove instructive.

Fully aware of the unavoidable imperfections, in all such attempts, the question of the propriety of publishing this Essay is submitted to my associated brethren of the King's and Queen's College of Physicians.

Rutland Square,
May 1817.

Natural Labours.

On the subject of *ordinary* Natural Labours, I have little to add to the excellent precepts clearly laid down some years ago, by Mr. White of Manchester; and still later by Dr. Osborne of London. With the former, I am persuaded, it contributes greatly to the safety of the mother and child, to allow the uterus *gradually* to empty itself during

delivery, first by expelling the head of the fœtus and afterwards the shoulders and body, by subsequent pains, with little or no aid. It is of some importance also to the infant, and especially to infants born in a feeble state, to allow the circulation in the umbilical chord to cease spontaneously before a ligature be applied. Doctor Osborne, apparently anxious to extend Mr. White's doctrine, advises the expulsion of the body of the fœtus to be retarded by the accoucheur in order to secure a more perfect contraction of the uterus. Such practice appears to me unnecessary, unless where the uterus shews a tendency to imperfect action in expelling the fœtus. In such cases there is danger that the same imperfection may extend to the expulsion of the secundines, and there can be no doubt of the propriety of the practice recommended by Doctor Osborne. I have been for some years in the habit, not only of retarding the expulsion of the fœtus in these cases, but, with a hand on the abdomen, of pursuing the fundus uteri in its contractions, until the fœtus be entirely expelled, and afterwards of continuing this pressure, to keep it if possible in a contracted state. Such pressure also tends to prevent syncope, which sometimes follows the sudden evacuation of the uterus, and consequent removal of pressure from the abdominal cavity. Labours conducted in this manner, will be less liable to be followed by retentions of the placenta, by uterine hæmorrhage and by af-

ter pains. In short, the *safety* and *speedy recovery* of a puerperal woman is most intimately connected with the gradual and perfect contraction of the uterus. Regardless of this important maxim, women, sympathising strongly with their sex under pain, can hardly be prevented from attempting to give assistance, and timid professional men, afraid to oppose vulgar and deep-rooted prejudice, are too often induced to adopt this pernicious and destructive practice. It affords me pleasure to have an opportunity of entering my protest against it, and once more of soliciting the reader's attention to the fifth chapter of Mr. Charles White's treatise on the management of pregnant and lying-in women. After describing his practice, he says "In this manner I have proceeded for several years, and can with satisfaction declare, that in natural labours I have never had occasion for the manual extraction of the placenta, nor have I ever been detained an hour by it; nor have I had occasion for the use of opiates to relieve after pains, which have generally been so trifling as not to deserve notice." Although my experience does not authorise such unqualified assertion, it does not fall far short of it. In 10,387 cases in the Dublin Lying-in Hospital, only 21 had retentions of the placenta, requiring manual extraction, that is about one in 494; calculating this event then at the rate of about one in 500, there are many practitioners who ought not to meet it above once or twice in

the course of their lives. Every man's recollection must enable him to say whether such events have occurred to him in greater or less proportion. On the subject of after pains, truth obliges me to acknowledge, there are some constitutions who suffer much from them in spite of the strictest observance of every measure hitherto proposed for their prevention. Women of an irritable fibre, more especially if subject to painful menstruation, appear to suffer most. A very brisk purgative given a few hours after delivery, has afforded relief to a few of my patients where repeated opiates, joined to the warmest aromatics, have failed to produce the desired effect.

Labours are rendered *tedious* either by causes weakening the expelling powers of the mother, or increasing resistance to the passage of the fœtus. Since it became usual to keep women in labour in a cool atmosphere, to prevent them making voluntary exertions during the dilatation of the os tincæ, and to support them by mild instead of stimulating nourishment and medicines, the powers of the constitution fail but seldom in expelling the fœtus, where there is no material defect in the formation of the pelvis. I mean where the *defect* from pubes to sacrum does not exceed half or three quarters of an inch. The practice of modern hospitals has sufficiently evinced the truth of this assertion.—It is certain that a labour really tedious, under the best management, is not without danger both to

mother and child ; I am however fully convinced that this danger is seldom lessened by the common expedient of extracting instruments. Under this conviction, forceps were used in fourteen cases only in our hospital, and in some of these cases I yielded my own opinion to the sanguine expectations of my assistants. Cases of convulsions excepted I have rarely had reason to be well pleased with the effects of extracting instruments and not unfrequently have I had much reason to deprecate their evil consequences. Wherever labour is protracted to a dangerous length by unusual resistances, there is nothing but mischief to be expected from their application ; but where the expelling powers are impaired by debilitating diseases, the interposition of an artificial extracting power is more rational and justifiable. Let it be remembered that in the hospital such means were employed in one of 728 cases, and in private practice, it is so long since I have had occasion to use, or even to think of using them, that I am persuaded a fair opportunity of applying forceps with good effect will not occur to a rational practitioner in one of a thousand cases. The proportion of women who died in the hospital of tedious labour is great, viz. about one to seven ; but it deserves consideration that some of these were admitted in bad health, before labour came on ; some were sent in after ignorant attendants had failed in attempts to deliver them ; and several died during the pre-

valence of two puerperal epidemics, of which the reader may find some account in the Edinburgh Medical Commentaries.* I am but little inclined to attribute the fatality attending such cases to a want of aid from forceps, as *one-half* of the fourteen women delivered by that instrument *died*, and an equal number of the fœtuses were *still-born*. It is possible that I may not possess all the dexterity, which some have in the application of extracting instruments ; and that I may have been sometimes too late in having recourse to them.— All I have to urge in justification of myself, is that few have had greater opportunities of practice in so short a space of time ;† that I have always observed instruments to be most easily applied where least necessary ; and that my experience of them was acquired in an *an Hospital*, in a situation where I felt myself totally uninfluenced by any existing prejudices, and where the only object I had in view was to discharge my duty conscientiously between mother and child.

Laborious Parturitions are chiefly occasioned by extraordinary resistance to the passage of the fœtus's head, in consequence of the bones of the mother's pelvis being distorted. Where instead of a space of four inches and a half from sacrum to pubes, the distance is only three and a half, or three iinches or less, a violent struggle ensues dur-

* Vol. 5. Decade 11.---† This was written A. D. 1793.

ing labour. The head of the fœtus is strongly compressed between these bones, often obstructing the discharge of urine, and when urged by strong efforts for six or eight hours against the same spot, without either advancing or receding, the inferior part of the bladder and the urethra near to it come to be in danger of inflammation and consequent mortification. Doctor Osborne has laudably endeavoured to ascertain the least dimensions of a pelvis through which a full grown fœtus can pass living, and he states 2 3-4ths. of an inch, as that through which it is impossible for it to pass alive. Having examined by dissection the bodies of many women, who died after tedious and laborious labours, I am enabled to state with some confidence, that 3 inches and a quarter from pubes to sacrum, is the least diameter through which I have known a full grown fœtus, to pass *entire*, but it was a very putrid fœtus, consequently the *head was* soft and pliable. In most laborious cases, the pelvis measures about 3 inches from pubes to sacrum, generally speaking rather *more* than *less*— 2 3-8ths. of an inch was the most defective diameter that occurred to me in the course of our dissections. Under the best management, and where an accoucheur does his duty *conscientiously* towards the fœtus, a laborious parturition is attended with great danger to the mother. Our hospital abstract shews that one in three died; but as I had occasion to remark of tedious cases, we frequently

received our patients after having suffered greatly by mismanagement ; and it is now well ascertained, that much of the success of the latter part of a severe labour, depends on the right management of its first stages. When a pelvis measures less than three inches from pubes to sacrum, I am of opinion that it is good practice to perforate the head of the fœtus at an early period of labour, and afterwards to leave it for some hours to be forced into the pelvis by pains, before any attempt is made to extract it by crotchet. But a practitioner ought to be very confident in his own accuracy and judgment before he ventures upon this practice, as I fear nothing but long experience can enable any man to measure the diameter of a pelvis with sufficient precision. Under this division of labours, I cannot help remarking the goodness of Providence to the female sex ; forty nine bad pelvises * in above 10,000 cases, is surely a very small proportion ; nor can I conclude it without adding that at the beginning of every labour, likely, to be tedious, it is of great importance to give a laxative medicine, which may operate three or four times, before the head becomes wedged in the pelvis so as to obstruct the passage of the rectum and bladder.

* A few cases should be added to these from the Preternatural Labours.

Preternatural Labours.

In *footling* cases, the safety of the fœtus depends very much on allowing the dilatation of the os tincœ to go on naturally and without interruption until it is completed. In such cases there can be no necessity to interfere in expediting delivery until the breech of the fœtus is expelled to the os externum when the circulation in the umbilical chord comes to be in danger of interruption. The body and head of the fœtus will always be found to pass, in well formed women, with facility in proportion to the previous dilatation of the soft parts.

Breech presentations were always, by my direction, left to the efforts of nature, except where the pelvis was evidently defective in its dimensions. It is a position less hazardous to the life of the fœtus than the former. The circumstance of four women dying in the hospital who had breech presentations, was accidental, and by no means the consequence of any disease induced by the position of the fœtus.

In *cross* presentations, our practice in the hospital must appear unsuccessful, but much of this is to be attributed to injudicious attempts to turn, and sometimes to pull away, the fœtus by the presenting arm before the admission of the patient.

Midwifes in this city and its environs, are in general, ignorant, self-sufficient, and prone to drunkenness. I have no doubt they destroy many of those entrusted to their care; nor have we any law, either to prohibit or punish them; I have good reason to think that three of the six patients who died of cross births, fell a sacrifice to their ignorance by lacerations of the vagina. No instance of the spontaneous evolution of the fœtus, in cross presentations, as described by Denman occurred in the hospital, one excepted, of which I am not altogether certain. One of my assistants in the hospital was sent for in the middle of the night, by the attending midwife, to turn a child; when he arrived in a few minutes after, he found the breech in the passage. Whether the midwife was correct in her examination and report I cannot pretend to determine. In two instances fœtuses nearly full grown and putrid were expelled double, when on the authority of Denman, I expected the breech to come foremost; both however were cases much mismanaged in the commencement. Among the lower orders of women in this city many of such mismanaged cases occur, and I have lately heard of several patients who lost their lives by practitioners of good repute insisting on turning the fœtus, although evidently putrid. Would not a better chance be afforded to patients so situated, by perforating the thorax or abdomen so as to lessen their bulk? By the aid

of crotchet or blunt hooke, the breech of the fœtus may be brought into the pelvis, when no probability of its expulsion by spontaneous evolution should appear.

For further information on this subject, I refer the reader to a short essay in the 40th number of the London medical and physical journal, by Dr. John Sims, and a letter from me to him which appeared in the 45th number of the same work.

In preternatural presentations of every species, where the mother's pelvis is very defective in its dimensions, it is well known that the head of the fœtus requires to be perforated behind one or both ears. In a few cases after having performed this operation in the most effectual manner, I found a great deal of force requisite to bring the head away; more indeed than appeared to me consistent with the mother's safety. In such cases Osborne's doctrine of early perforation, and leaving the head to soften by putrefaction, and to be forced low down by labour pains, is admirable; and I am happy in embracing this opportunity of publicly bearing testimony to its merits.

Uterine Hæmorrhages.

During the last quarter of pregnancy, this complication of labour is dangerous both to mother

and child. In Lying-in-Hospitals, I suspect that these diseases do not occur in the ordinary proportion, because it is notorious among women, that under such complaints, rest and a horizontal position are absolutely necessary; and therefore, patients so situated, are afraid to leave their own habitations to go to an hospital.

Of the *twenty four* cases of hæmorrhage recorded in our registry, *fourteen* happened before, and *ten* after delivery. Of the former, *four* originated from some portion of the placenta presenting near to the os tincœ, and consequently *ten*, from some accidental separation of a portion of the placenta from the uterus, when attached to its fundus or sides.

Mr. Rigby of Norwich, the first English writer who clearly established this distinction between uterine hæmorrhages, denominates the former, *hæmorrhage from unavoidable cause*, and the latter, *from accidental cause*. Of *eighty five* cases of hæmorrhage, which preceded the delivery of the full grown fœtus, Mr. Rigby found that *thirty four* proceeded from unavoidable cause, and *fifty one* from accidental cause. He endeavours to prove that these two species of hæmorrhage require nearly opposite treatment; that in the first *manual* extraction of the fœtus by the feet, or forced delivery, is absolutely necessary to save the life of

the mother; and that in the second species, such practice is never requisite; that the first is an occurrence of great danger, he having lost *nine* of the *thirty four* cases he records, and that the second is of little danger, he not having lost one of those proceeding from accidental cause; nor did he think it necessary in a single instance to force delivery. This was Mr. Rigby's doctrine in the first edition of his invaluable work—in later editions, he has with much candour admitted, that aid may be necessary in hæmorrhage from accidental cause, although in his third edition he adds, "I have never yet met with a case." page 70.

Of the *four* placenta presentations which occurred in the hospital, *one* was a case of first pregnancy, one occurred in the 6th, and one in the 8th month; another had a defective pelvis, and consequently the head of the fœtus was perforated—the mother recovered—in the three first mentioned cases, labour was forced, and *one* died, viz. the patient in her first pregnancy.

Of the *ten* cases from accidental cause, *four* had delivery forced, *one* died. *One* had a defective pelvis, the head of the fœtus was perforated, the mother died.

One had a cross presentation, the fœtus was turned, and the mother *died.*

Two had the membranes ruptured at an early stage of labour, both *recovered.*

Two were left entirely to the efforts of Nature, and *one died.*

Hence it is evident, that of the *ten* cases of uterine hæmorrhage from accidental cause, *four* proved fatal under very different modes of treatment. This result is entirely at variance with Mr. Rigby's experience.

It is a remarkable fact, that of the twenty four cases of uterine hæmorrhage recorded in our Registry, there is not one case of twins; and only five cases of first pregnancy, two occurring before, and three after delivery.

The proportion of hæmorrhages that proved alarming after delivery, is very trifling, not more than *one* in a *thousand.* This I am inclined to attribute to our patients being kept very cool during labour, to the prevention of voluntary exertions during the dilatation of the os tincœ; and to the disuse of cordials. Not one case of hæmorrhage after delivery proved fatal.

Convulsions.

Of *nineteen* cases of this disease, *fifteen* occurred to patients carrying single children, *four* to those

carrying twins. *Thirteen* of the former happened before delivery, and two only after it.

Of the above *thirteen*,

Six were delivered by perforater and crotchet, (in one of them the umbilical chord was prolapsed.) All recovered.

Two were delivered by Forceps, *one* died.

Five were trusted to nature, and all recovered.

One died of a fit after delivery.

Of the Four Twin cases.

One was delivered by forceps and died.

Three were left to the efforts of Nature, of whom *one* died.

Of the whole number affected by this formidable disease, sixteen were cases of first pregnancy; and hence we may remark two striking differences between uterine hæmorrhages and convulsions. The former occur seldom in cases of first pregnancy, or of twins; the latter often, and with very serious effects. One general principle directed our conduct in the treatment of both diseases, viz. to trust to Nature's efforts un-

til the patient's life appeared to be endangered by the continuance of the disease, and then to interfere in the speediest and safest manner to effect delivery. This will account for our frequent use of the crotchet in the treatment of convulsions. By looking into the cases of this disease on record, I observed that where the operation of turning a child was employed to expedite delivery, the event in general has been less successful, probably owing to the great irritation excited by it; and therefore, where the forceps or lever cannot be safely applied, the perforator and crotchet seem fairly indicated. After many fair trials of the medicines recommended to counteract this disease before delivery, I must own I have no great confidence in their powers—venæsection freely employed is in a few cases useful by *diminishing plethora*, and in all cases it tends to prevent the bad effects of blood accumulated in the brain by repeated paroxysms. Acrid purgative glysters produce good effects, and especially by their tendency to excite labour pains. From opium I have never been able to perceive the slightest advantage, except in checking the recurrence of paroxysms after delivery.

The loss of one in five patients, attacked by this malady, will, I flatter myself, be deemed moderate by those who have most extensive opportunity of seeing it.

Where a number of paroxysims precede and follow delivery, *insanity* is a common consequence, and sometimes continues for many weeks, so as to excite great apprehensions in the minds of the patient's relatives. I have never been wrong in prognosticating a favourable termination, one case excepted, which proved fatal.

Three of the four patients who died of convulsions lingered only a few hours.

Retentions of the Placenta.

This occurrence is less frequent now than formerly, for reasons already assigned. * It is somewhat remarkable, that of the *twenty one* cases in our Registry, *twelve* were cases of first pregnancy; and not one happened to any woman carrying twins. Of the four who died, *three* bore first children. Seven were accompanied with flooding, of which *one* died.

In general we waited from *two* to *twenty four* hours after the delivery of the child, and seldom interfered till some symptoms of danger arose, and *especially* during the first two or three years of my mastership. † In five cases I observe the uterus

* Vide remarks on Ordinary Natural Labours.

† Master is the title of the Physician, to whose care this Hospital is entrusted, for a period not exceeding seven years.

is remarked to have been contracted by spasm in its middle, and thus to have given rise to retention.

There are few subjects on which the opinions of writers and practitioners are more divided than on the management of retentions of the placenta. Much may be said both for and against the early manual extraction of it; for my own part, I am now fully satisfied, that after waiting two hours, and using such gentle means as are commonly employed to promote its expulsion without effect, little is to be expected from the efforts of Nature; and that the patient has the best chance of recovery from a prudent interposition of Art.

Where the retention is occasioned by a want of contractile power in the uterus, the object of a prudent practitioner in introducing his hand, ought to be to excite the womb to action, by gently stimulating it, and thus to procure the *expulsion* of the secunderies, instead of *forcibly extracting* them. A great deal of time therefore should be employed in this operation, and especially where there is no alarming hæmorrhage.

Where again the placenta is retained by spasm affecting the middle of the uterus, a moderate exertion may be made by introducing the hand to overcome this, and if a greater force be required than is consistent with the patient's safety, it may

be advisable to suspend the operation, to give a large dose of opium, and to renew our efforts when this medicine shall have begun to produce its *anodyne* effects. This expedient I recommend on the authority of writers, never having found it necessary in my own practice.

When the placenta is retained by morbid adhesion to the uterus, I am unable to advise what is best to be done; much must be determined by circumstances, and fortunately for the female sex and their attendants, it is a very rare occurrence.

Of Lacerations and Gangrene of Urethra and Bladder.

These are among the most unfortunate consequences of severe labour which I have met with, and it affords me great consolation to reflect that they occurred only in the proportion of one in two thousand patients and these all cases of first pregnancy.

The notes in our registry, concerning these cases, I shall transcribe:

A. B. delivered of a boy dead and putrid, was fifty hours in labour, although the os uteri was not entirely obliterated more than twelve hours before delivery. Inability to retain urine came on

the second day. On introducing a catheter into the bladder, some days after, and passing a finger under the urethra an aperture was discovered about an inch and a half from its orifice, which also extended to the inferior part of the bladder.

C. D. delivered of a boy dead and putrid, was seventy-two hours in labour, after some days, inability to retain urine supervened suddenly, and on examining as above, a large aperture was discovered in the bladder and urethra—the perinœum was also lacerated.

E. F. After thirty hours labour was delivered by forceps, on account of severe pressure on the same part of the urethra for six hours. On the twenty-third day after delivery, a large portion of membrane was discharged from the vagina, preceded and followed by an involuntary discharge of urine. On examination as in first case, a large aperture was discovered in the inferior part of the bladder. The child died on the second day after delivery.

G. H. After twenty-six hours labour, was delivered of a boy dead and putrid. Involuntary discharge of urine ever since delivery. On examination, the urethra was found lacerated to a great extent. The head of the fœtus in this case was protruded at the os externum, without any assistance whatever.

J. K. After sixty hours labour, os uteri was not entirely obliterated. The head of the fœtus was perforated and cautiously extracted. On the 10th day after delivery, some inability to retain urine came on. An aperture in the urethra and bladder was discovered by examination, as in the foregoing cases.

I have been induced thus to sketch a short outline of *five* melancholy cases, to shew the reader that these events happen to patients under very different circumstances and modes of treatment. Nothing astonished me more than to find the bladder injured where the uterus lay between it and the child's head during the whole period of labour, as in the case last recited.

In no instance did the pressure, which proved destructive to the urethra and bladder, become fatal to the mother. Such occurrences after delivery deprive the patient irremediably of all worldly enjoyment. The urine dripping through the lacerated or mortified parts, excites inflammation and great tenderness in the vagina; the patient acquires a putrid urinous smell, which renders her loathsome to herself and others; she becomes unable to stand or walk with any comfort, and in this state drags on a miserable existence, obliged to confine herself very much to a sitting or horizontal position.

The only effectual mode of preventing such occurrences is, by having early recourse to the perforater and crotchet; but whether any thing, which does not actually endanger the life of the mother, can justify such an operation, I am unwilling to attempt to determine. Unfortunately the effects of pressure on different constitutions are so extremely different, that we can never, with any certainty pretend to say whether dangerous inflammation will ensue. There will be always much reason to apprehend bad effects, when the head of the fœtus presses firmly against the same spot for six hours without advancing or receding, and when at the same time the catheter cannot be passed into the bladder.

I deem it unnecessary to take up time in treating of modes of curing this disease, as I fear none are yet discovered.* By frequent washing, the use of Peruvian bark, sea-bathing, and wearing a large soft sponge to the os externum to absorb the urine, some relief may be afforded; by time also the apertures may contract somewhat in some instances by the growth of fungus, but no instance of a perfect cure has come within my knowledge.

* Mr. Barnes, of Exeter, has related a case of this disease successfully treated, in the sixth Volume of the Medico-Chirurgical Transactions of London, Page 583. His observations on this subject are exceedingly interesting, and his practice worthy of imitation.

How cautious then should practitioners be in cases where they are in danger of entailing incurable misery on their employers! When it arises from the laudable motive of saving an infant's life, much may be said in extenuation; but when it proeeeds from a hasty and injudicious application of extracting instruments, as I have sometimes known, among the middling and lower orders of women, it is a crime deserving of the most serious reprehension.

Of Lacerations of the Vagina and Uterus.

Since the publications of Doctor Douglas of London, in the year 1784; of Mr. Goldson in 1786, and of Doctor Garthshore in the year 1787, the subject of lacerations in vagina and in utero has been greatly elucidated. As such accidents are rare, I shall first give a short account of such cases as occurred in the Hospital, and sbbjoin a few general remarks;

A. B. admitted on the 30th of March, 1787, at two o'clock, P. M. the membranes ruptured and some smart labour pains ensued, which soon went off. Next day at ten o'clock, A. M. I saw her; the head of the fœtus had entered the pelvis so far that its vertex was nearly on a line with the arch of the pubes. The patient vomited a good deal,

and her pulse was frequent and rather low. I ordered her wine whey ad libitum. She died suddenly in about three hours afterwards.

On opening the abdomen next day, some foul air rushed out followed by a quantity of red serum—a large putrid fœtus was soon discovered among the intestines, which bore marks of inflammation on many parts. The vagina was found extensively lacerated in its anterior part near to its union with the os tincœ. The bladder was entire. There was a small round aperture on the posterior part of the vagina, opposite to the projection of the sacrum; this pelvis measured three and a half inches from sacrum to pubes and was deficient in every dimension.

This was the only patient who died undelivered during my mastership, and as it happened at a period when a good deal of consternation prevailed on account of puerperal fever, I suspected the midwife gave an imperfect report of the case.

C. D. Admitted and delivered on the 12th of April, 1788, of a ninth child, a boy dead. The right arm and shoulder protruded at the os externum. In attempting to turn the fœtus, I found the resistance to my efforts much less than it was reasonable to expect. At the end of thirty hours, and after much severe vomitting, she died. This patient had been under the care of two midwives

for twenty four hours before admission into the Hospital. On opening the abdomen, marks of general inflammation, many clots of blood and much red serum, were found in the abdominal cavity, there was a great laceration of the anterior part of the vagina from the uterus—bladder entire —pelvis of ordinary size.

E. F. Admitted on the 6th of November, 1788, had strong labour pains till three o'clock, P. M. on the 7th, when a vomiting, with soreness of abdomen and some menorrhagia came on—her pains abated and she got some sleep, which prevented the midwife for some hours from sending for assistance. She awoke with hiccup, her pulse became small and frequent, and the head of the fœtus retracted somewhat. This was her second child.—As the head of the fœtus was out of the reach of the forceps, it was turned and brought footling with some difficulty through the pelvis. The head could not be got away without perforation, and in doing this, Doctor Evory, then my assistant, was very apprehensive of injuring the intestines which he thought he felt in the vagina. After suffering a great deal from diarrhœa, pains in and round the pelvis, hectic flushings, &c. she was dismissed valetudinary at the end of a month, and was seen twelvemonths after selling milk about the streets.

On the day of this patient's illness I had suffer-

ed so much from fatigue and anxiety of mind, that I was unable to interfere further than by requesting she might be speedily delivered, as her life appeared to me in imminent danger.

G. H. Admitted on the 18th of December, 1789—six hours after the rupture of the membranes, in her 7th pregnancy, as she was lying down on a couch she heard a crack within her—the labour pains abated, and she felt her child rise high in the abdomen—she complained immediately of pains in the hypochondria, and some uterine hemorrhage came on. Some hours after these events, which happened in the middle of the night, her pulse was frequent and indistinct; the expression of her countenance wild and full of agony. On examining the position of the head of the fœtus to ascertain whether forceps could be applied, it instantly receded into the cavity of the abdomen, through a rupture on the posterior part of vagina. I followed it immediately, and extracted the fœtus footling through the ruptured parts: a portion of the omentum protruded at the os externum, the placenta was easily extracted from the abdominal cavity—she *died* in twenty hours after delivery.

I. K. Admitted on the 13th of July, and delivered on the 14th, after the membranes ruptured, an arm presented, it was her fourth pregnancy.—

No great force was required to bring down the feet. The patient died four hours after delivery, and on inspecting the abdomen, the anterior part of the vagina was found lacerated entirely across from one side of the pelvis to the other, from pubes to sacrum this pelvis measured three inches and a half.

L. M. Admitted on the 11th of February, 1791, in her eighth pregnancy, with symptoms of laceration in the vagina or uterus. No part of the fœtus could be felt presenting. This patient reported that a midwife had used many efforts to bring down an arm before she left home. On introducing my hand, I found the anterior part of the vagina widely lacerated, with the fœtus and placenta in the abdominal cavity—both were easily extracted through the ruptured parts, so that the pelvis was well formed in this case. This patient died in 24 hours after delivery.

N. O. Admitted on the 18th of October, 1791, a fourth pregnancy—after twenty-four hours, a sudden cessation of labour, with some uterine hæmorrhage and retraction of the head, supervened. The pulse and respiration became hurried, and the abdomen sore to the touch. A putrid fœtus was extracted by turning without much difficulty. The patient died in twenty-four hours after delivery, and on opening the abdomen, the vagina was found lacerated to a great extent on its anterior

part. The pelvis from pubes to sacrum measured somewhat under three inches.

P. Q. Admitted on the 20th of March, a third pregnancy. After five hours labour with the head presenting, symptoms of laceration in the vagina or uterus supervened. In an hour after, the fœtus was extracted footling through the ruptured parts; she died in a few hours. On opening the abdomen, the vagina was found to be lacerated almost entirely from the anterior part of the os tincœ. I regret that no notice was taken of the dimensions of the pelvis.

A survey of these eight cases, will shew that the anterior part of the vagina, near to its connection with the os tincœ, is the part most apt to give way on certain extraordinary efforts whether of Nature or Art.

Not only from these, but various other cases, I am strongly inclined to think that Mr. Goldson is right in alledging most of the cases, described by writers as ruptured uteri, to be really lacerations of the vagina. Previous to the publication of Mr. Goldson's pamphlet, I thought I had seen two cases of ruptured uterus; as the limit, however, between the vagina and uterus, immediately after delivery, is but indistinctly marked, subsequent observations incline me to think I may have

been mistaken.* Generally where there is no mismanagement, lacerations of the vagina are incident to cases of narrow pelvis, the efforts to overcome unusual resistance, occasionally prove fatal.

We are indebted to Dr. Douglas, for instructing us in the easiest manner of effecting delivery in cases of lacerated vagina or uterus, viz. by extracting the fœtus footling through the ruptured parts. This surely, is a much more natural project than the cesarean section which has been proposed by many writers. Nor can I agree with Dr.Garthshore in his proposal of leaving the fœtus, in certain cases in the abdominal cavity, rather than extract it through the ruptured parts. The cases cited by him, of women surviving such accidents, happened at periods when midwifery was but little understood, and therefore appear to me of very questionable authority; but let us admit the fact, and suppose a patient to survive the escape of the fœtus and placenta into the cavity of the abdomen, through a laceration in vagina. Life surely must prove burthensome in the extreme to such a patient, besides that she will probably

* During my friend Doctor Evory's mastership, I saw in the Lying-in-Hospital, one very interesting case of rupture at an angle of the uterus, near to the insertion of one of the *Fallopian* tubes. The ovum was found entire in the abdominal cavity, containing liquor amnii, a fœtus nearly full grown, &c.

have afterwards to undergo the painful process of Nature expelling such fœtus as she commonly gets rid of extra uterine productions. It must be allowed that under the very best management, lacerations of the vagina generally prove fatal, and especially if the fœtus gets into the abdominal cavity. All we can say is, that there is a possibility of recovery; we have unquestionable evidence of two successful cases, one under Dr. Hamilton of Edinburgh, the other under Dr. Douglas of London. To these I think we may venture to add the case of our patient E. F.* The Dublin medical and physical essays, vol. 1. p. 348, supply us with a well authenticated case of recovery, by my friend Dr. Labatt. Much of our success must undoubtedly depend on a speedy delivery after the accident happens, as Dr. Douglas has clearly proved that dangerous peritonial inflammation will soon succeed to the fœtus getting among the irritable abdominal viscera.

Although I have ventured with some freedom to state the results of my observations and judgment on this doubtful topic, I am by no means inclined to think our experience yet sufficient to enable us to come to a positive decision; and I am the more inclined to doubt, when I recollect that I have ventured to differ in opinion from a writer of the late Dr. Garthshore's experience and acknowledged abilities.

* Page 392.

Of Prolapsus of the Umbilical Chord, and Varieties of Natural Labour.

I do not believe that all the occurrences of this nature in our hospital, are recorded in our registry; being seldom of such importance as to require either my aid, or that of my assistant, they were more likely to be forgotten. The events of such as are noticed, are fairly stated.

It appears that one in four children survive the prolapsed chord, although I have seldom found it practicable to afford any effectual assistance to the fœtus, by any of the measures commonly recommended for replacing the prolapsed funis.

From the result of the fontanelle and face presentations, it is evident that writers err in classing them always under tedious and laborious parturitions; it is but seldom that they give rise to either.

Were I inclined to be prolix, much might be here added on the subject of the mortality of lying-in-women and their children; on the different degrees of danger to women bearing single children and twins; on the difference between the mortality of male and female infants, and the cau-

ses of it: &c. but having elsewhere * treated of these subjects at some length, I think it better to refer the reader to the original essay, a copy of which may be also found in the 9th volume of the London Medical Journal.

The following is an attempt at a list of the diseases which proved fatal to our patients; which may gratify the curiosity of some of my readers.

Died.		Died.	
32	Of Peritonitis.	92	
21	Synochus & typhus.	3	Vagina ruptured by efforts of art.
15	Hectic fever.	3	Atrophia.
6	Phthisis Pulmonalis.	2	Grief apparently.
3	Pneumonia.	1	Hemiplegia.
2	Hydro-thorax.	1	Enlarged ovarium containing hair, sebaceous matter, &c.
5	Uterine Hæmorrhage.		
4	Convulsions.	1	Ileus.
4	Vagina ruptured by efforts of nature.	21	Anomalous Disease.
92		125	

Of these, 34 were opened after death, and 56 were cases of first pregnancy.

* Philosophical Transaction, part II. for 1786.

AN ABSTRACT

Of the Registry kept in the Lying-in-Hospital of Dublin, from the 1st of January, 1787, till the 1st of October, 1793, being a period of Six Years and Nine Months.

Of 10,387 Women delivered, 10,199 were Uniparous---184 had Twins---3 had 3 Children---and one had 4.

By the terms Natural Labour. we mean all those in which the head of the fœtus presents at the os uteri. By preternatural, we mean all those in which any other part of the fœtus than the head presents.

By *Ordinary* Natural Labour, we mean all those which terminate within 24 hours after os uteri begins to dilate freely.

By *Tedious* Natural Labour, we mean such as exceed 24 hours in duration, but where there is no such disproportion between the head of the fœtus and the mother's pelvis, as to render destructive instruments necessary.

By *Laborious* Natural Labour, we mean such as are protracted beyond 24 hours, and where the disproportion between the head of the fœtus and the pelvis is so great that it becomes necessary to diminish the bulk of the former to save the life of the latter.

The terms Footling, Breech; and Cross, we use in the common acceptation.

LABOURS OF UNIPAROUS.

	NATURAL.						PRETERNATURAL.										
	Ordinary.		Tedious.		Laborious		Footling.		Breech.		Cross.		TOTALS.				
No. of women	9748		134		49		184		61		48		10,199				
dead.	71		21		16		1		4		6		199 or nearly one in 86				
	Males.	Femls.	M.	F	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.		
Children still born.	170	170	26	15	32	16	36	21	8	10	20	13	538	293	245	one to 19	
Ditto dead.	186	164	5	3			5	0	0	3	2	0	368	198	170	one to 28	
	Forcps. 2		Forcps. 12														

Tedious Labours,.....	1 to 70
Forceps used 14 times,	1 to 728
Laborious Labours,...	1 to 208
Preternatural ditto,...	1 to 40
Tedious, Laborious, and Preternatural, to the whole.	1 to 25

Complications of Labour.

24 Cases of uterine hæmorrhage. 14 before, 10 after delivery.—In four cases, some portion of Placenta presented—One of these only died.

5 Motherss died.

10 Children still born. Some of them premature.

21 Cases of Retention of Placenta, requiring manual extraction---Seven accompanied with uterine hæmorrhage.

4 Died.

19 Cases of Convulsions. 17 before delivery. 16 were cases of first pregnancy. 3 were delivered by forceps, and six by crotchet.

6 Mothers died.

10 Children still born.

5 Cases of Laceration or gangrene of urethra and neck of Bladder, with involuntary discharge of urine.

None of the Mothers died.

One child was born living by the aid of forceps.

5 Cases of Laceration of vagina, by efforts of Nature.

3 Do. Do. Do. Art.

One only survived.

66 Cases of umbilical chord prolapsed before the presenting part.

17 Infants were born living.

Varieties of Natural Labour, i. e. where any other part than the vertex of head presents.

17 Fontanelle presentations recorded.
2 Of which were tedious.
1 Laborious.

44 Face Presentations.
2 Of which proved Laborious.

LABOURS

OF THOSE WHO BORE TWINS.

			Still born.		*Deaa.*	
Women	Males	Females	Males	Females	Males	Females
184	168	200	21	22	10	15

Women having Twins,		1 to 56	1 half.
Women dead, -	6	1 to 30.	
Children still born,	43	1 to 8	1 half.
Do. Dead,	25	nearly 1 to 15.	

N. B. 47 had two Males.
66 had two Females.
71 had Male and Female.

Presentations of some of these Cases.

Head and feet.	Both Natural.	Feet and head.
25	16	10

Breech and head.	Both footling.	Both breech.
6	3	2

Breech and feet.
1

Forceps used Once.

MEDICAL REPORT

OF THE

FEVER HOSPITAL

IN

CORK STREET, DUBLIN,

FOR THE YEAR

1814.

BY

JOHN O'BRIEN, M. D.

FELLOW OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

THE chief object of this institution being the diminution and extinction of contagious fever, which has been the greatest scourge of this Metropolis for a series of years; it is much to be lamented, that certain uncontrollable causes of a physical and moral nature, continually tend to counteract the consequences originally expected from it, and render its *apparent* effects by no means commensurate with its real utility. This will appear from an account of the admissions for the last three years which is extracted from the register.

Years.	Admitted.
1812	2273
1813	2619
1814	2392

In fact the number of admissions has annually increased since the foundation of the hospital ; and though somewhat less on the last, than the preceding year, it has been greater than on any former year since the commencement.

A fact so remarkable as the continual increase of numbers, since the commencement of the Institution, cannot fail to excite surprise and awake inquiry. Under the operation of the wisest and most beneficent Institution which human philanthropy could devise, for the extinction of fever, we behold its quantity annually multiplied, and its ravages extended in a ratio proportioned to the activity of that benevolence, which would stop its career.

To investigate and fully develope all the causes which concur to keep alive, and augment contagious fever in this metropolis, would extend the present Report beyond its assigned limits; and indeed they have been so ably described in the former reports of this hospital, and in those of a neighbouring institution, the Sick Poor Institution Meath street, that the quickest sagacity can scarce-

ly hope to light on any thing but tedious repetition. I shall therefore content myself with briefly enumerating the causes which appear to me the most efficient and prominent in producing the effects above-mentioned, viz. Want (of food and cloathing;) filth (of houses and narrow lanes;) crowded and narrow apartments, particularly cellars; intoxication, with its consequences, sloth and idleness.

After the many strong appeals, and affecting pictures of misery, already laid before the public, I think it superfluous to dwell on this distressing subject: for a full account of those causes which are subsidiary to the progress of contagion, I beg leave to refer the reader to a little tract lately published by Mr. Ball, whose description of the misery of the Dublin poor, I have personally seen verified in numberless instances. This gentleman has justly remarked that houses of recovery succeed only partially in the prevention of infection, viz. by curing infected persons, contracting the sphere of contagion, and lessening the mortality; but that an efficient system of Police (supported either by public authority or private association,) is absolutely necessary to give an effectual and permanent check to its progress.

The object of such a system, of course, would be to encourage cleanliness (the great antidote to contagion) among the poor; to clear the wretched

receptacles in which they dwell, of their accumulated filth; to discourage residence in cellars, and to excite industry, the parent of cleanliness and sobriety; to provide work for the unemployed, and rouse the passive brutified creature from the torpor of sloth, vermin and rags, into a confidence in his own exertions. A system of this kind would not only be useful in stopping the progress of fever, but would operate as a practical discipline, to improve the taste, habits, and morals of the people, and raise them in the scale of civilization.

Of the activity and wide operation of the causes above assigned, in propagating contagion, though we cannot entertain a doubt; it still remains uncertain, how far the natural virulence of the epidemic, and the occult constitution of the season, might not of themselves, unaided by secondary causes, have produced the augmentation of numbers in our register, and to whatever combination of causes we may attribute this augmentation, it is certain, that an unusual febrile constitution, has prevailed in Dublin, since the beginning of the year, 1810.

It is a question of the highest interest and importance to determine, whether Fever is generated by contagious matter alone, or whether the depravation of the animal fluids produced by want and unwholesome diet, be a sufficient cause for its production. From the facts which have fallen under

my observation, I would conclude, that a certain class of fevers is generated from this latter source, and from cold, namely the simple inflammatory and bilious fevers; but I am inclined to think that the Typhus fever is the peculiar product of contagion. This observation however, I am aware, is liable to many exceptions: exceptions which the unknown laws of this disease throw every moment in the way of generalization. It frequently happens that the fever which commences with the mild appearances of the simple inflammatory, will after some time, terminate in the worst species of Typhus; and on the other hand, that persons evidently under the influence of contagion, will pass through a disease of a mild form, and without any of those dangerous symptoms which mark the character of bad Typhus. In many instances, I have seen three or four members of the same family, brought in together, or in succession to the hospital; one of whom perhaps would die, another would escape with difficulty, and one or two more would pass through the disease without the least alarming symptom.

The proportion of Fevers of a mild character to those of a malignant one, is extremely variable.—On one year, the mild cases will be much more numerous than the malignant; on another, the latter will equal or exceed the former. It appears, on reference to the Register, that since the year 1810,

though the number of fever patients has greatly increased, the relative mortality has considerably diminished.

In year	1810,	1811,	1812,	1813,	1814.
it was,—	died, 1 in $11\frac{12}{79}$	—1 in $12\frac{94}{113}$	–1 in $13\frac{4}{13}$	–1 in $16\frac{52}{163}$	–1 in $91\frac{113}{143}$

The proportion of mild to malignant fevers being thus variable, it is impossible to fix upon any numbers except by guess, which will express it: in a loose estimate which I formerly made, I rated the malignant cases at a sixth part of the whole, but this proportion, on reflection, I think too small, as I have since seen several instances where the malignant cases formed a majority of the entire number.

The division of fever into mild and malignant is merely practical, and used for plainness and conciseness, as best adapted to a short sketch of this kind; it is the first great distinction which practically presents itself to the Physician's view in a large fever hospital, and is intended to comprehend the different species of fever called by Nosologists, Catarrhus, Synocha, Synochus, Typhus Mitior, Typhus Gravior.

The mild class of fevers is distinguished from the others, not only by the mildness of their symptoms in general, but by the shortness of their periods; they terminate in general on the 5th, 7th, or 9th days, and very rarely run on to the

14th ; whilst the Typhus fever has its crisis protracted in general to the 11th, 14th, 17th or 20th days, and very often to much longer periods. The mild class of fevers requires little complication of treatment, unless when accompanied by the inflammation of some internal viscus. Their most painful symptom in general is severe head ache, which will pretty certainly be relieved by the application of six or eight leeches to the temples, and the rest of the cure accomplished by smart purging, and the plentiful use of dilutents, together with rest and low diet.

The other class of fevers or malignant, is that which demands the aid of medicine, and the sedulous attention of the Physician—their attack and progress are generally marked by the following symptoms.

For the first few days, the patient complains of languor and fatigue on the least exertion, the eyes lose their animation, and the face becomes sallow and dejected ; and in some cases, as I have thought a little bloated and puffy ; there is a heavy dull pain of the head and sometimes of the chest also, which makes the patient suppose he is labouring under a catarrh or common cold---slight nausea, and anxiety without apparent cause---slight rigors frequently come on, especially towards evening ; at the same time the patient is deprived of sleep, or

only enjoys painful disturbed slumbers. Things continue thus for a few days, in some instances for a week or two, until the increasing debility and head ache compels the patient reluctantly to keep his bed. As the disease advances, the prostration of strength increases; the face becomes more livid, but sometimes flushed and red, the eyes more heavy and of a dirty red colour; a vehement delirium, or sometimes a low muttering one, now succeeds, and the patient must be kept in bed by force--some again fall into a coma or lethargic state, from which it is impossible to rouse them, and are incapable of articulating a word, or understanding any thing; and declare, on recovering their senses, they have felt no pain, and imagine at first they have awaked from a deep sleep. The tongue, which at first was white, becomes gradually yellow, brown, and ultimately, in the worst cases, black on its surface; the mouth and teeth are covered with sordes of a black colour, which are constantly renewed as fast as they are wiped off. The pulse, which was at first hard and full, now becomes small, quick, and feeble, always over 120 in a minute; this state is frequently accompanied with tremors of the tongue and muscles, which render the patient nearly incapable of moving.

In the worst description of cases, and which terminate fatally, in addition to the symptoms above mentioned, the patient will be affected with

subsultus tendinum, heaving of the chest, and difficulty of respiration, picking of the bed-clothes, coldness and blackness of the extremities, gangrene of the hips and loins, inflation of the epigastrium, inability of swallowing, which is the certain forerunner of death.

The appearances of the skin are various---the feet and hands in some cases will be of a purple colour, as if tending fast to gangrene ; black patches also will appear on different parts of the body.

The most usual appearance, however, is that where the body is covered with petechiæ, which sometimes cover the body totally, and sometimes are only partially clustered on the neck, chest, and back. In one case I have seen typhus fever combined with purpura hæmoragica, that is, a general petechial state of the skin, with a bloody serum oozing from the gums, nostrils, and eyes.--- This petechial appearance of the skin does not seem to be essentially connected with any particular type of fever, although nosologists have generally considered petechial fevers as a distinct class. In some cases, the petechiæ will disappear after three or four days, in others they will continue to the end ; they will sometimes attend very mild forms of typhus, and be absent in the most malignant.

The next appearance of the skin which presents itself and is very common, is a deep yellow, indicating a form of typhus extremely dangerous, particularly in old persons, in whom it is accompanied by such a derangement of the biliary system, as is generally incapable of supporting the violent vascular action excited by the fever. In fevers of this type, the head or understanding is not much affected.

In the abdomen, the patient, if in his senses, will sometimes complain of severe griping pains, or will be tormented with a dysenteric and bloody purging, or a diarrhea. If not in his senses, he will pass both fœces and urine involuntarily; he will be affected with inflation and hardness of the epigastrium and hypocondres; though at the same time perhaps, harassed by a diarrhea, this symptom, however, accompanies only the worst forms of the disease, is extremely fatal, and is usually the forerunner of death.

Another distressing symptom in the abdomen to which patients are liable is, a retention of urine, which is exceedingly dangerous, and requires the utmost attention of the medical attendants. As it generally takes place when patients are in a state of insensibility and incapable of describing their feelings, and as the nurses are frequently deceived by the moisture of the fœces on the bed linen, which they mistake for urine, and report accord-

ingly, it may pass unnoticed for a considerable time. This is a point on which strict examinations are daily necessary, and strict instructions to the attending nurses, in order that on the least appearance of tension in the region of bladder, the catheter may be employed.

The appearances of the tongue are various, and highly important. In the mild class of fevers, its surface is generally covered with a thick white mucus, occasionally deepening towards the middle and back part into a brown streak. When the tongue is white, it is also generally moist ; when brown or black, it is always parched and dry ; and the change of colour seems to depend a good deal on this circumstance. In the typhus fever, it varies almost into every shade from white to black, deepening in colour as the disease advances. The usual appearances are such as I have already mentioned. The mark of the most malignant form of fever we meet with in the Hospital, is a dry black crust on the tongue and lips, with black sordes of teeth, and great fœtor of the mouth. In some instances, the tongue will appear of a glossy red, as if the mucous membrane had been inflamed.

The pulse is an object also of the highest importance ; its variations, however, being only fleeting sensations presented to the sense of touch, even if accurately remembered, could not be made

intelligible by words—the terms hard, soft, full, weak, low, &c. are relative terms, which are always applied arbitrarily by Physicians, and probably in every individual, stand for different ideas. In fact the doctrine of pulses can never be made intelligible by language; owing to the multiplicity and diversity of the sensations they exhibit to the sense of touch. This hinders not, however, that they may be a most useful index to us in fever; though not to be learned from language, they may from experience; and this knowledge is no doubt one of the most useful which experience teaches. One quality only of the pulse remains a constant and certain guide to the Physician, viz. its frequency, which being subject to no ambiguity, and capable of accurate measurement, forms a pretty uniform criterion of the different degrees of danger in fever. When over 150 in a minute, they will scarcely be numerable; though a good deal depends on the steadiness and presence of mind of him who counts them.* In cases of coma, they are generally but not always slower than natural. In cases of violent delirium, rapid and unequal. In cases of black crusted tongue without coma, they are always over 120, and very often innumerable. Approaching death, they usually produce the sensation of vibrating wire or thread.

The subject of crisis forms an essential part of the pathology of fevers; but unfortunately it is

* Dr. Heberden has counted them as high as 180.—Vide his Essay on the Pulse.

one which requires a minuteness of observation scarcely compatible with the laborious duties of this extensive hospital ; the difficulty also is increased by the impossibility in most instances of obtaining accurate information of the precise commencement of the disease not only from patients themselves, but their friends, who generally date the commencement from the time the patient is obliged to keep his bed.

For the first three years as accurate a register as possible was kept of the day on which fever declined, which is as follows :

On day of Fever.	No. of crisis.	On day of Fever.	No. of crisis.	On day of Fever.	No. of crisis.
2	2	11	117	20	20
3	16	12	121	21	17
4	45	13	82	22	11
5	129	14	79	23	8
6	117	15	74	25	6
7	262	16	51	28	4
8	173	17	42	31	2
9	212	18	30		
10	118	19	35		

Although the period of three years is too short to enable us to draw any certain inference ; yet some useful information may be derived from the above. If we suppose all those fevers which terminated within the 10th day, to be of the simple inflammatory or mild type ; we may conclude the 7th, 8th, or 9th to be the chief critical days in this

class of fevers, and this exactly coincides with my own observation. In the remainder of the column which comprehends the long fevers or those of a dangerous type, the 12th appears to be the day of greatest importance; and I think this agrees pretty nearly with what I have observed. The remaining numbers decrease nearly in arithmetical proportion, and do not enable us to select any one as much more prominent than the rest. The critical days above pointed out are altogether different, (except the seventh,) from those mentioned by Hippocrates; this, however, may naturally be expected from the difference of climate and other circumstances—the chief critical days of Hippocrates were the 7th, 11th, 14th, 20th. The 7th is the highest number in the above column, and as it is also one of the days of Hippocrates, we may safely select this as the most probable of the entire number.

To derive any practical utility from the doctrine of crisis, it would be necessary to shew the connection between the symptoms and critical days, so that the latter may be inferred with some certainty from the former, and some principles established which may guide our prognostic in the different types of fever. The present notions entertained on this subject are obviously vague and unsettled, and the Physician who hazards a prognos-

tic will hardly feel himself qualified to do more than guess at the crisis. The pathology of fever, however, would gain a vast acquisition by the establishment of certain principles on the subject of critical days, and it were to be regretted, if the difficulty of the subject should produce a relaxation in that industry which is necessary for the advancement of science. Some important advantages are evidently presented by this large institution, for observing all the laws and peculiarities of this disease; and it may be hoped on the opening of the new building which is intended to be added to this hospital, that a better arranged and less crowded state of the wards will enable the Physicians to resume their observations on this subject with energy.

In the typhus fever, although death will often take place as early as the fifth or sixth day, I do not think a crisis to recovery ever takes place before the 11th day or 12th. If it passes those days, we may look to the 14th as the next probable day, then the 17th and 20th. The crisis is sometimes protracted to the thirtieth or thirty-first day, but this is very unusual; in protracted fevers indeed, it is generally impossible to mark a crisis at all with certainty—they appear gradually to wear out, and are attended with a very slow recovery, and the subjects are generally old debilitated persons.

The following table will exhibit the scale of mortality, and the admissions for each month in the past year :

	Remains from last month.	Admitted.	Died.	Discharged.
Jan. 5 - - - -	87	160	19	151
Feb. - - - - -	77	168	13	142
March, - - -	90	154	4	164
April, - - - -	76	178	8	165
May, - - - -	81	159	13	155
June, - - - -	72	171	9	154
July, - - - -	80	184	12	158
August - - -	94	178	12	163
September, -	97	225	15	213
October, - -	94	281	12	242
November,	121	277	10	260
December, -	128	263	14	261
	1097	2398	141	2228

It may be seen by this table that the mortality was greater in the month of January than any other ; this was owing to the number of bad cases of pneumonia which occurred in this month, produced by the unusual severity of the winter of last year. In those instances where fever patients are attacked with pneumonia, from the tardiness and reluctance of the people to apply to the Hospital till all other succour is hopeless ; the critical moment passes away, at which a prompt and judicious

use of the lancet might rescue the patient from impending death ; thus it happens that the employment of this remedy in many instances comes too late after the patient's admission to the Hospital, when effusion has already taken place, and when V. S. will accelerate the patient's death.—After the months of January and February, the combination of pneumonia and fever began to disappear, and the typhus again assumed the ascendancy ; I have however observed, that the fevers of last year were more frequently attended with general rheumatic pains, and displayed more of the inflammatory character than on the preceding one.

The remedies which are employed in the cure of fever, are contained in a very short catalogue ; but it were well if its plan of treatment were easy and simple, in proportion to the fewness of the remedies which are administered for its cure. In fact, there is no disease which falls under the physician's eye, which makes a larger demand upon his head and heart—no disease which requires more experience, judgment and humanity, than fever. As no specific remedy has as yet been discovered, it is evident that the right management of this disease will depend rather upon an attentive and watchful observance of its varying symptoms, and a judicious application of appropriate remedies to those symptoms, than on the use of any one of them

individually—it will depend on care and a system of treatment, rather than on particular remedies. One of the first objects therefore ought to be the selection of honest intelligent nurses who will perform the duty entrusted to them faithfully. This is a point of the utmost importance, both to the patient and the Physician. From the apprehensions which are justly entertained of the danger of contagion, it is seldom that fever patients are examined by any but the Physician and nurses; and from the impossibility of the constant presence of the former, the task of minute attendance, and reporting every change to the Physician, necessarily devolves upon the latter. If this duty is negligently or unfaithfully performed, the worst consequences, will obviously be the result.

As a discussion in detail of the merits of each of the remedies employed in fever is evidently inconsistent with the brevity of an annual report, I shall content myself with giving a general account of those in most frequent use.

Bloodletting in fevers of a malignant type, is a remedy which has lately excited much controversy among Physicians; and it is curious that the history of Medicine, since the days of Hippocrates, affords the same diversity of opinion on this subject. The Arabian school of Physic was

divided, it appears, into two sects, who took opposite sides in this dispute, the enemies of bloodletting being called in derision, "αιμοφοβοι."* In France the practice of bloodletting in fever was more prevalent than in any other country in Europe; even there, however, it had violent opponents, and indeed one of the ablest of their Physicians † Lieutaud, recommends great caution in its employment.

In England, the practice of bloodletting in the beginning of fever was prevalent since the days of Sydenham, until the ingenious hypothesis of Brown brought the doctrine of stimuli into fashion, since which time till very lately, port wine was considered almost a specific in this disease. The doctrine of stimuli having run its course, we are again reverting to the old plan of treatment by evacuations; and Dr. Mills, of this City, has the merit so far as I can see, of being the restorer of the old practice, at least in this country. There is no doubt whatever but this plan, under certain modifications, is a considerable improvement in the treatment of

* See Fordyce on Fever.

† Jam diu invaluit mos ut prædictæ febris medela sanguinis missione ineatur: de quo tamen dissentiunt auctores, hanc ut plurimum proficuam censemus si vires ferant, sed non nisi summa cautelâ iterari debet, compluries nobis observasse contigit quod ab illis (V. S.) repetitis morbus truculentior evadat imo fatum acceleretur.—Lieutaud, Synops. Medicin. Lib. 1. P. 30.

fever, and of this I think the history of our Hospital affords strong evidence, for though the number of admissions has greatly increased, the mortality has uniformly diminished for the last two or three years since its introduction. When I say its introduction, I must not be understood to mean that the plan of repeated venæsections throughout all the stages of fever, is the one practised in the Hospital; but in my opinion it has had an influence on this; for by banishing the fears formerly entertained against blood-letting, it has encouraged us to adopt certain modifications of it, together with topical blood-letting, with more boldness.

It is evident that the malignant class of fevers is the proper object of experiment in this enquiry, and that no fair deduction can be made from its success in the mild class of fevers, where though harmless, it is altogether useless, as they will pretty generally yield to the simple plan of treatment above mentioned.

In many cases of the worst description of fever in their first or second stage, I have directed two or three bleedings to the amount of six or eight ounces, and aver that so far from observing any ill effects from it, I have uniformly observed a mitigation of the head-ache, delirium, and general pains with which fever patients are afflicted, pro-

duced by it. I am decidedly of opinion, however, that blood-letting is applicable only to the first stage of fever, and should never be persevered in beyond this—in those instances where blood was taken in the advanced period of the disease, I have always found its texture broken down and dissolved, changing rapidly into a greenish, watery fluid, with little coagulum, indicating great dissolution of the animal fluids, and consequently great debility. In those cases where bleeding may be thought advisable, I would literally follow the example of the sagacious Sydenham:

"Ad ægrum accersitus mox sanguinem e brachio educendum curavi, modo nimia debilitas, præsertim vero provectior ætas non contra indicaret; et venæsectionem insuper alternis diebus ad duas ad huc vices repetendam jussi, nisi redeuntis sanitatis signa aliter suaderent." P. 184, de febri continua, an. 67.

"Sanguinem e brachii venis mittendum, ea quantitate quæ ægri viribus ætati, aliisque circumstantiis, convenire visa est, ante omnia curavi." P. 256 de febri continua an. 73.

Although I conceive general bleeding to be applicable only to the first stage of fever, I have not hesitated to employ topical bleeding of the head, either by leeches or opening the temporal artery, in every period of the disease. As a remedy for

the head-ache and delirium with suffused eye, with which fever is generally attended, I know nothing more prompt and decisive than topical bleeding of the temples, and have seen several instances where this remedy has subdued the fiercest delirium.

In the application of both general and topical blood-letting, however, much caution and discretion are necessary—to say that in many instances they will not fail, would be to assert what every Physician knows to be untrue. To select the cases in which they will be beneficial, and the mode and measure of applying them, requires therefore, the constant care and study of the Physician.

Blood taken from an artery has a much more debilitating effect than taken from a vein in equal quantity; I am therefore of opinion, that arteriotomy is chiefly applicable to patients of a strong robust habit, with great determination of blood to the head. In persons of lax febre and delicate frame leeches, are to be preferred, as producing less debility; and in those cases, if the violence of the delirium should render the opening of the temporal artery necessary, it will be found that two or three ounces of blood will have all the beneficial effects of a larger quantity, and yet be much more safe.

The next class of remedies, and of equal impor-

tance with the former are purgatives, the utility of which, in the fevers of this city, is so generally understood among Physicians, that is is unnecessary to adduce any arguments in support of it—It is evident, however, that when the mode of depletion above-mentioned is also made use of, more caution is necessary than when this remedy is used alone. If the fact of their utility is established, it does not signify how we explain their mode of operation. The good effects appear to me to be produced chiefly by derivation. When the alimentary canal is exonerated of its feculent load, and gently stimulated by the action of purgatives, a more free circulation will naturally be excited through its entire extent ; the consequence of which will be a revulsion from the head and surface of the body. This derivation from the surface, is proved by the decrease of heat in the skin, which generally succeeds the exhibition of purgatives, and also by the diminution of its flush and redness. This diminution of blood in the capillary arteries of the surface, will naturally relax them, and render them more fit for exhalation : accordingly we find that perspiration is rather promoted than diminished by the exhibition of purgatives. Exclusive of this, it appears to be the invariable effect of fever, to be constantly depositing a morbid secretion in the alimentary canal which requires constant removal. It is surprising what a quantity of green or black fæces will con-

tinue to accumulate, even with the constant use of purgatives; exhibiting a complete morbid change of the secretions. Whenever this appearance of the alimentary secretion exists, and it does exist for a longer or shorter time in all fevers, continual purging will be necessary. The best test of the state of the alimentary canal is the tongue, which to a diligent observer, will be found to exhibit its different morbid secretions with tolerable uniformity and accuracy; where the fæces are black and very fetid, it is usual for the tongue also to be brown or black on its surface; when the fæces are green, the tongue is generally yellow. The first indication of a healthy alimentary secretion, is always exhibited by a change of colour in the tongue. After the exhibition of a smart purgative in the evening, it is common to find the tongue on the following morning, not only less densly coated, but its brown or black surface margined round with a circle of white. This in many instances, is the mark of an approaching crisis; in others it is illusory, and will occur, and again recede when the debility forbids the constant use of purgatives. An instance has lately occurred to me of a very malignant fever, in which the appearance of the tongue did not differ from its healthy state, being of the natural pale red colour—the patient was affected with diarrhœa during the whole progress of his fever.

The purgatives in most frequent use in this hos-

pital are calomel, castor oil, and a mixture composed of infusion of senna and sulphat of magnesia—of these I generally prefer the two first, and frequently have recourse to the combined powers of both, where great fullness and hardness of the abdomen exists, the castor oil being given at a certain interval after the calomel. On the patient's first admission, unless contraindications exist, I generally direct a powder or small bolus of three grains of calomel, six of rhubarb, and a few grains of ginger to be taken, and in four hours afterterwards, half an ounce of castor oil, and half an ounce tinct. senna. This generally produces three or four large evacuations, and effectually clears the alimentary canal. This plan, sometimes omitting the calomel, and sometimes the castor oil, is continued every second or third day, according to the state of the patient's strength. In protracted fevers, where great debility exists with black stools, a pill consisting of two or three grains of calomel with ginger, is directed in the morning, and a common purging enema in the evening.

On the intervening days, in the early stages of the disease, a powder consisting of two grains of antimonial powders, and two grains of ipecacuan' is ordered to be taken three times a day; and to this, where there is a tendency to costiveness, and soreness of the epigastric region, a grain of calomel is sometimes added. The object, and I

think general effect of these powders is to soften the skin, to relieve its heat and dryness, and renders it more fit for transpiration. When this plan fails to produce a crisis about the 14th day, and if the abated vehemence of delirium, and encreased rapidity and smallness of the pulse, indicate increased debility, I am in the habit of substituting in place of the antimonial medicine, a draught consisting of one ounce of camphor mixture, and half a drachm of Hoffman's anodyne, to be taken every three hours. This medicine I have found of the greatest utility in rousing the sinking powers of life. At this time also wine is allowed, at first in small quantities, but afterwards increased daily in proportion, as the sinking powers of life seem to demand its support. Concerning the use of wine in fever, I cannot help adding, that in the advanced stages of the disease, I have always found its effects highly salutary, and it were much to be regretted, if the prevailing taste for depletion should bring into contempt or disuse, this powerful and salutary alexipharmac.

Cold dashing has been frequently tried in this hospital, and a very convenient machine was contrived for this purpose ; but such is the shock and terror produced by it on most patients, that it is with extreme reluctance they submit to it. In its place therefore, we generally substitute the tepid or cold ablution, the benefit of which is universally

acknowledged by the patients. In cases of obstinate delirium, after the head has been shaved, the cold ablution will be found one of the most effectual adjuncts to topical blood-letting—indeed in many cases, if applied first, it will obviate the necessity of this remedy altogether; occasionally in very obstinate cases of delirium, an artificial cold mixture made with equal parts of muriat of ammonia, and nitrat of potass, is applied to the head as a substitute for ice, whilst the feet are at the same time immersed in warm water. Pediluvium is generally directed by me every night when practicable, and when not so, frictions and stuping of the feet, which are always highly grateful and comfortable to the sick, relax the skin, and procure sleep.

The use of blisters in fever has been disputed with as much warmth nearly, as venæsection. The effect ascribed to cantharides, by Baglivi, and deduced from his experiments, of attenuating and dissolving the blood, I do not think at all verified by observation, at least in their application to the surface of the body. In inflammatory disorders, the blood will retain its siziness and density, after the application of several blisters. In those cases where fever is accompanied with the inflammation of any of the viscera of the chest or abdomen, their use is indispensable. In acute head-ache also, a blister applied to the back of the neck, will in many in-

stances produce the most decided relief to the patient. I do not however, by any means, recommend an indiscriminate use of them, and think their application requires considerable judgment and experience. In cases of great irritability and sensibility of the skin, they produce intolerable pain, and do more injury by their general effect, than service by their local. Indeed, under those circumstances, patients generally take care to relieve themselves by tearing off the blister altogether. The same observation is applicable to violent delirium, which is usually accompanied with great irritation and mobility; in those cases, no contrivance can prevent the patient from tearing off the blister if within his reach, which proves the irritation and suffering it produces. In cases of coma and stupor, dullness and heaviness of the countenance and the eyes, they are decidedly indicated, and always produce good effects; in those cases I have often applied them to the nape, the temples, and the forehead in succession.

It is customary to apply them as a stimulant in the last or sinking stage of fever, but when applied in this manner as a dernier resort they generally come too late, and I do not recollect to have ever seen them produce any effect, although I am conscious, that when all other resources are

found unavailing, necessity will often compel the Physician to try this final one. For the hiccup, which is a common and very distressing symptom in fever, after trying all the antispasmodics, I know no better remedy than a tea-spoon full of vinegar taken from time to time, which generally succeeds in checking it, at least for a time. A bladder filled with warm water and applied to the pit of the stomach, has also frequently succeeded.

In the choice of drink, the taste and palate of our patients, who are generally obstinate in this respect, seldom leave a power of selection to the Physician, some will prefer one, and some another kind of drink, and there is an obvious necessity for gratifying their wishes. In the simple inflammatory fever, where great dilution is desirable, tepid whey appears to be the most grateful and effectual diluent, and is also generally most palatable to the sick. In the advanced stages of Typhus, where the mouth and teeth are covered with black sordes, and there is an evident tendency to putrefaction in the animal fluids, the mineral acids from their well known efficacy in correcting this tendency, together with their stimulant and tonic qualities, are far preferable to all other diluents. In those cases also, the effervescing mixture and barm are highly useful; the latter in particular, will be found an excellent corrector of the black

and putrid stools which occur at this period of the disease. When given in moderate quantity, no apprehension need be entertained from its purgative effects; I have frequently directed it to the amount of half an ounce, four times a day, for several days in succession, without observing any thing more than a laxative effect produced. In Diarrhœa, which is very common in bad fever, acids appear to do injury, at least we have for this the respectable authority of Lommius,* who recommends in those cases barley water, in which red hot iron had been extinguished; this remedy, which appears a little fanciful, I own I have never tried, but should be glad to find Lommius's character of it verified, as numerous instances have occurred to me, where the state of the head forbade the use of opium, and in which this perplexing symptom has resisted all other astringents.

Various other remedies are occasionally employed in fever in common with other disorders; but being such as particular symptoms only may call for, or the sagacity and resources of the Physician may suggest, they cannot be introduced as peculiarly belonging to this disease. Emetics have been much extolled for the cure of fever, but being adapted only to its first stage, they are seldom in my opinion, applicable to the bad fevers of this hospital, whose subjects scarcely ever apply for

* Page 178 de febribus.

admission until the disease has been of several days standing, and debility has commenced. The great tendency of blood to the head also in this stage of the disease, appears to forbid their use. The circumstances under which I have found them most advantageous, and in which I generally employ them, are in cases of relapse after fever; in which an emetic administered in time, will often remove the returning disease at once.

MEDICAL REPORT

OF THE

FEVER HOSPITAL

IN

CORK STREET, DUBLIN,

FOR THE YEAR

1815.

BY

RICHARD GRATTAN, M. D.

FELLOW OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

NEARLY twelve years have elapsed since the House of Recovery in Cork-street was first opened for the reception of patients labouring under contagious fever. During the period of its establishment, ample opportunity has been afforded of ascertaining from experience, the benefits of such an Institution, and I therefore think it may prove not altogether uninteresting, briefly, to trace its history from its foundation to the present time.

In a medical point of view in particular, some information may be obtained, by comparing to-

gether the events of so many successive years; for, it is only by instituting a comparison between the result of our own observations, and of those who have preceded us, that a science so widely extended, and so difficult as that of medicine, can ever be cultivated with any prospect of success. Besides, as a national establishment, whether we consider it with reference to the number of patients that it is capable of accommodating, or with respect to the excellence of its system, and the admirable regularity with which it is conducted, the Fever Hospital justly occupies the first rank amongst all others of a similar kind in Europe, and hence no inconsiderable degree of importance must at all times be attached to the several occurrences, which have marked its progress.

I shall therefore in this Report, give a slight sketch of such events as appear most worthy of being recorded, and make such observations on each, as the practice of the last year has suggested.

In the treatment of any highly contagious disease, to separate the sick from those who are as yet free from its influence, and to preclude as much as possible, all unnecessary intercourse between them, is an object of such evident moment, that few are disposed to question its utility. Indeed the benefits which we derive from a strict adhe-

rence to this necessary rule of prevention, and the evils that result from its neglect, are more than sufficient to convince us of its importance, as well to individuals, as to the public in general.

To preserve the health of the public at large, is a national concern, and has long been deemed a subject worthy of legal interference. Accordingly the Legislature has enacted, that every precaution shall be adopted which may contribute to prevent the introduction of diseases from foreign countries ; and to the enforcement of the laws of quarantine, we are probably at this moment indebted for our exemption from the plague, and perhaps other disorders, scarcely less contagious or destructive.

But, although the introduction of contagion from other climates, had early attracted the public attention, and was anxiously provided against by the strictest laws, it was not until a later period, that the security of individuals was sufficiently attended to. For, though the health of individuals, is doubtless an object of minor importance, it however, by no means deserves to be considered as totally unconnected with the public welfare, inasmuch as the death, or even temporary illness of a single industrious individual, detracts something from the general resources of the country. Such an occurrence, therefore, is to be regretted, on this account merely, even independently of every

humane consideration. But, when the country is thus deprived of the services of many such individuals, the injury becomes serious, and increases in proportion to their number and industry.

Of course it must be obvious, that every measure calculated to diminish the extent of such mischief, should be vigorously adopted, and this object, so desirable, is peculiarly practicable in contagious diseases. In diseases of this nature, it may be accomplished by separating the sick from those who are still in health ; for thus, the disease is checked in its commencement, and numbers are preserved from its influence, who would otherwise perhaps have become its victims, and contributed in their turn to communicate it to others.—Public Hospitals therefore, were established for the purpose of removing from their own habitations such individuals as were unable from poverty or other causes,either to provide themselves with the means necessary to their recovery, or to adopt measures calculated to prevent the disease from spreading further.

In Manchester and Waterford, institutions were founded with this view, and their example was quickly followed in this city, so deservedly celebrated for the number and extent of its charities.

At a meeting of the principal inhabitants, held

on the 28th of October 1801, subscriptions were entered into, and a Committee appointed, to whom the management of the intended establishment was confided. Government also liberally contributed their assistance; and a sufficient fund being thus procured, an extensive plot of ground was purchased in Cork-street. The first stone of the Hospital was laid in the month of April 1802, and in about two years it was completed at an expense amounting to 11,318*l.* 13*s.* 11*d.*

It consisted originally of two uniform buildings four stories in height, placed at a small distance from each, and connected by a covered walk open to the south. One building was exclusively appropriated for the reception of fever patients, and the other was occupied by the convalescents and resident officers of the establishment.

Corresponding externally, their interior arrangement was however different. In the fever side, each story was constructed with a gallery placed in the centre of the building, and extending throughout its entire length. The galleries were terminated at either end by windows, and on each side were the doors which opened into the wards occupied by the patients. Each ward was intended to contain two beds, and in each there was a window and fire place. The wards were thirty-six in number, that is to say, nine on each floor; but of

these, thirty-one only were fever wards, the remainder being required for the accommodation of the nurses and for other purposes ; so that at its commencement the Hospital was calculated to contain only sixty-two fever patients.

In the other building, the two upper stories, were each formed into two large rooms, two of which were occupied by the female, and two by the male convalescents, while the remainder was inhabited by the Secretary, and the Apothecary. Each of the convalescent wards contained twelve beds, making in all forty-eight, and thus between fever and convalescent patients, the entire number which the Hospital could accommodate amounted to 110.

In deciding on the plan of the Hospital in its original form, the Committee were most solicitous to procure every possible information : they consulted such medical characters as were celebrated for professional ability ; and on comparing their opinions, and judging from the experience of other Institutions, they, after much deliberation, finally determined on that which I have just described.

The hospital was opened for the reception of patients on the 4th day of May, 1804, and its relief was at first confined to that portion of the town which was more immediately situated in its vicinity, those persons only being admissible, who re-

sided within the limits of a particular district, comprehending about one-third of the southern division of the city, and containing a population estimated at 75,000 individuals.

In the commencement, the hospital had much to contend with, and many difficulties to encounter, originating for the most part, from the ignorance and prejudices of those for whose relief it was intended. To enter within its walls as objects of charity, was at first, even by the lowest ranks of society, considered a matter of disgrace, while the idea of being removed to a fever hospital, tended to increase their reluctance, by exciting in their minds the most formidable apprehensions.—Hence, rather than avail themselves of its advantages, numbers preferred remaining in their own dwellings, though destitute of every comfort, and perhaps altogether incapable of procuring the medicines necessary for their recovery.

In consequence, however, of the extraordinary care and attention which the patients experienced from the physicians and other attendants, these prejudices gradually disappeared, for the individuals were few indeed, who, on departing from the hospital, expressed themselves in any other than the most grateful manner, for the kindness with which they had been treated. They were therefore anxious to apply it to themselves on all

future occasions, and with a degree of confidence, founded on experience, they equally recommended it to their friends and acquaintances.

In the succeeding year, the funds being increased by an additional Parliamentary grant, the Hospital district was enlarged, so as to admit patients from all parts of the city, south of the Liffy, and within the limits of the circular road.

This district, according to the Reverend Doctor Whitelaw's survey, contained a population of 112,497 souls, of which a great proportion was lodged in ill-constructed and badly ventilated houses, where little attention was paid to cleanliness, as the rooms were generally occupied by distinct families, who having no permanent interest in the house where they resided, could seldom be induced to co-operate, for the purpose of cleansing the common entrance and stair-case. Of course an accumulation of dirt was the consequence, which, by giving rise to a constant exhalation of noxious effluvia, rendered the air still more impure, and predisposed the inhabitants to disease. Great attention was therefore paid by the Committee to obviate this evil, and arrest as much as possible, the progress of fever, by whitewashing the apartments of those who had been removed to the hospital.

The hospital continued on the same footing,

both with respect to the number of its beds, and extent of district, from 1805 until the end of the year 1807, but during the year 1808, an additional fever-building was erected, and the beds increased to 180. The district was consequently enlarged, and from the beginning of the year 1809, patients were admitted from the north side of the town, so as to comprehend the entire city, situated within the Circular Road, the whole population of which amounted in the year 1798, when the last survey was made, to 170,805, of which number 75,279 were males, and 95,526 females.

It might be supposed, that this extension of district would have been productive of a corresponding increase in the number of patients admitted; but this was not the case, for in the year 1809, the admissions were rather less than in any of the three preceding years. The efficacy of the fever Hospital system was therefore considered as fully established, and confident expectations were entertained, that fever would soon be a disease of rare occurrence in the Metropolis.

This opinion it would seem, had the support both of reason and experience; for reasoning from our knowledge of the general laws of contagion, we must *a priori* conclude, that the measure of immediately separating the sick, on the first appearance of fever, would confine the disease, for the most

part, to the individual in whose person it originated. The experience of the hospital also, from its commencement to the end of the year 1809, contributed materially to strengthen this opinion. At first, as has been already mentioned, it afforded relief only to a limited portion of the town, afterwards the district was enlarged, so as at last to comprehend the entire city, and even latterly, persons of every condition were admitted, although in the commencement it was intended merely for the labouring poor, and the servants of families were therefore excluded.

Notwithstanding these various causes, however, any one of which was of itself sufficient to produce a considerable increase in the number of applications, it appears from the annual reports of the Committee, that the admissions from January, 1805, to January, 1810, were nearly equal, averaging at the rate of about 1100 each year. Than this nothing apparently could be more decisive; nothing seemed to demonstrate more clearly the present efficacy of the institution, or to hold out more encouraging expectations as to the future. But in the summer of 1810, a fever of unusual malignancy, broke out in Dublin, which spread with rapidity, and threatened at first to exceed every former epidemic in point of fatality. From this period, the admissions increased to more than double what they were in the corresponding months of 1809, and conti-

nued in the same proportion to the end of the year.

In the month of September, in consequence of the low condition of the funds of the hospital, a statement was submitted to the public, explaining this circumstance, and soliciting subscriptions. This appeal of theCommittee to the public, amongst other observations, contained the following :— "From the Physicians of the hospital they learn, that during the four past months an epidemic fever prevailed in this city, and throughout many parts of Ireland, unparalleled in malignancy and extent for many years past, and were it not for the check given to the spreading of contagion, by the immediate admission of the infected persons, together with white-washing and fumigating the habitations from whence the patients were brought to the hospital, there are strong reasons for believing, that this populous Metropolis might have suffered, and been now suffering under a fever comparatively destructive as the plague."

The donations received on this occasion amounted to upwards of two thousand pounds, a sum sufficient to recruit the finances of the hospital, and enable it to continue its relief on the same extended scale as before. However, notwithstanding every exertion to arrest the progress of contagion, the epidemic still continued to prevail ; and even at the present moment, if we are to judge from the

number of admissions, it yet rages with increasing force.

The formidable increase of patients from the commencement of the year 1810, to the end of the year 1815, is evident from the following table, which gives the numbers admitted in each year since the opening of the hospital.

PATIENTS ADMITTED.

From 14th May, 1804, to 5th Jan. 1805, -	422
—— 5th Jan. 1805, to 5th Jan. 1806, -	1028
—— 5th Jan. 1806, to 5th Jan. 1807, -	1272
—— 5th Jan. 1807, to 5th Jan. 1808, -	1092
—— 5th Jan. 1808, to 5th Jan. 1809, -	1072
—— 5th Jan. 1809, to 5th Jan. 1810, -	1056
—— 5th Jan. 1810, to 5th Jan. 1811, -	1774
—— 5th Jan. 1811, to 5th Jan. 1812, -	1478
—— 5th Jan. 1812, to 5th Jan. 1813, -	2273
—— 5th Jan. 1813, to 5th Jan. 1814, -	2620
—— 5th Jan. 1814, to 5th Jan. 1815, -	2398
—— 5th Jan. 1815, to 5th Jan, 1816, -	3787
	20,278

From the great increase of business, two temporary physicians were appointed in 1811, one of whom, Doctor George Lee, died shortly afterwards of a bad typhus fever, which he caught while engaged in attending to the duties of the hospital.

In 1812, the influence of contagion amongst the attendants, seemed to have acquired additional activity. The hospital in this year had to lament the death of Doctor Joseph Lynch, and also about the same time, that of the Rev. Jas. Whitelaw, Vicar of St. Catherine's, the celebrated author of the Essay on the population of Dublin. Both these gentlemen, it is said, derived their disease from the same patient, while engaged in the discharge of their respective offices; their anxiety for the interests of a stranger inducing them perhaps to lose sight of that caution, so necessary to their own security.

In the following year, Mr. Hale, the apothecary, was seized with typhus fever, and to my attendance on him I think I have reason to ascribe that with which I was myself attacked. In this year, from the continued pressure of increasing admissions, the finances of the hospital were such, as to render it necessary a second time to apply to the public for assistance. The donations received in consequence amounted to nearly 1500*l.* and it deserves to be particularly noticed as a proof of the high estimation to which the hospital had attained in the opinion, not merely of the better ranks, but even of the lower classes, that the labourers employed at Howth harbour, contributed from their wages the sum of 27*l.* 12s. 9d. and remitted it with a letter expressing in the most flattering manner their gratitude to the officers of the Institution, for the attention which several of them had experienced while under their care.

Although the Hospital had from the commencement progressively advanced in the public estimation, and had gradually acquired the highest character for its excellent management and extensive utility, its occurrences were still confined to those more immediately connected with the institution, and had not as yet become the subject of public investigation. About this time however, a work was published by Dr. Mills, one of the temporary Physicians, giving an account of his particular practice and improved method of treatment in fever. This work had for its object to recommend the use of blood-letting in fever, as a remedy of more value than is at present supposed, and capable of being more generally applied in the management even of the worst cases.

To every one who fairly considers the fatality of fevers, and the many difficulties the Physician has to encounter in their treatment, it must appear, that even an attempt at improvement, should be received, if not with approbation, at least with indulgence. It was therefore peculiarly unfortunate, that the author of the work in question should have considered it necessary to form a comparison between his success and that of his colleagues. If instead of so doing, he had compared his own success at different periods, and had calculated the proportion of deaths amongst his own patients, prior, and subsequently to his

adopting the practice of blood-letting, then such statement would have been highly candid and praise-worthy. However, he stated, as a strong recommendation of his practice (more I am satisfied from want of reflection than from any ungenerous motive) that the average proportion of deaths amongst the patients placed under his care, was only as one to twenty-five and a half, while the proportion of deaths in the Hospital during a period of eight years, was as one to eleven.

The permanent Physicians, some of whom had been attached to the Hospital from its commencement, felt hurt at this assertion, and conceiving that their characters were called in question, they examined the several documents connected with the subject, and published the result of their inquiry in a letter addressed to the Committe. From this letter it appears in the most satisfactory manner that the statement was erroneous, and that the proportion of deaths to recoveries, was different from what it had been represented. The tables annexed to the letter are calculated with precision, and they go decidedly to prove that the proportion of deaths among the patients of the author of the Essay on blood-letting, was as 1 to $11\frac{18}{21}$, and among those of the other Physicians, during the entire period of his attendance as 1 to $12\frac{41}{110}$.

The cause of this miscalculation on the part of

the author of the Essay, I am confident originated in mistake, and is to be ascribed to the circumstance of his having excluded from the number of his deaths, such patients as were not treated by blood-letting, or who died of diseases different from fever. It appears to have escaped his observation, that by calculating his comparative success, without charging *all* such deaths, he must of necessity have a considerable advantage over his colleagues; for when he estimated the deaths in the Hospital as in the proportion of one to eleven, *every* death which occurred, whether by fever or otherwise, was included.

The Committee in 1808, as has been already mentioned, increased the number of beds to 180, with a view to accomodate at all times, if necessary, patients to that amount. For this purpose they erected an additional building, situated between the two former, and placed three beds in each of the fever wards. It was found, however, that the wards of the under-story were ill adapted for the reception of patients, in consequence of their imperfect ventilation and want of sufficient altitude; they were therefore closed; but in order to employ as many beds as possible, the rooms formerly occupied by the convalescents were converted into fever wards, and the patients when convalescent were removed to the small wards of the central house. But, notwithstanding every

contrivance, the Hospital still proved too limited; 144 beds was the greatest number that it could be made to accommodate, without running the risk of crowding it to excess, and a fourth building was therefore determined on.

The Parliamentary grant received in 1814 amounted to £5,000, so that sufficient funds were placed at the disposal of the Committee, to enable them to carry their plan into execution. In the month of June 1815, they accordingly commenced building the proposed addition, and so rapid has been its progress, that it is now nearly completed. The plan is unlike that of the fever wing, which I have already described. Its exterior, for the sake of uniformity, is nearly similar, but the wards are differently constructed. It is a single building of four stories, the lowest of which is divided into apartments not appropriated for fever, while the other three are each formed into two large wards of sufficient extent to contain twelve beds each.

Some of the Physicians, much longer connected with the Hospital than I have been, and possessing of course, greater experience, were strenuous in recommending the adoption of large wards, conceiving that large wards are decidedly the best calculated for fever patients. It is therefore with considerable diffidence, that I venture to entertain an opinion different from them, and am rather

disposed to give a preference to the small wards of the eastern wing.

The reasons by which I am influenced are of some weight, and certainly not altogether unworthy of attention. In the first place, it is evident, that large wards are subject to many inconveniencies, from which the small wards are in a great measure free. It is well known that in fever, quiet is often one of our most important means in accomplishing a cure; but in large wards which contain twelve patients, it is for the most part nearly impossible to prevent continual noise. Amongst so many patients, some one or other must constantly require to be attended, and the disturbance thus occasioned, can hardly fail to interrupt the rest of those who could otherwise compose themselves to sleep. In delirious cases, the objection to large wards is obvious for the same reason, and in cases of extreme danger, even though unaccompanied with delirium, the objection is equally strong. If a patient ill of low fever, shall behold another expiring near him, I would ask, must not the influence of such a circumstance naturally retard his recovery? We know that in fever, the depressing passions are those which exert the greatest influence on the mind, and that the imagination, unnecessarily, creates for itself a thousand causes of uneasiness and apprehension. Every circumstance, therefore,

which can be productive of anxiety should be studiously avoided, for it must be allowed, that in fever particularly, a calm and tranquil disposition conduces to recovery, and that whatever violently agitates is injurious.

It is also to be observed, that in the treatment of different kinds of fever, it is sometimes necessary to regulate the temperature of the room, and accommodate it to the nature of the disease, for in some fevers the air can scarcely be too cool, while in other cases, a similar degree of coldness would tend materially to aggravate all the symptoms. In simple inflammatory fever, for example, a free circulation of cold air is desirable, but in fever combined with pneumonia, even when the pulmonary affection is trivial, air of a low temperature cannot be inspired, without increasing the cough, and adding to the difficulty of respiration.

Now in large wards containing cases of every description, it really becomes a matter of considerable difficulty to manage each patient in the manner best calculated to ensure his recovery; but when the wards are small, the Physician has it in his power to assort his cases; he can place such as are dying, or whose fever is malignant, in a room separate from those who are recovering; those who require cool air he can put in one room,

and those to whom it would prove injurious he can place in another.

In all hospitals, but more particularly in those that are established for the treatment of contagious diseases, frequent white-washing is an object of the utmost importance. Indeed, in no hospital whatever, is there more attention paid to neatness and cleanliness than in our's; but at the same time it must be admitted, that when the wards are large, they cannot readily be white-washed as often as could be wished. To white-wash with advantage, the ward should be suffered to remain unoccupied for two or three days at least, in order that it may be perfectly ventilated, and that every part of the walls and ceiling shall be thoroughly cleaned. This, in wards which contain only two beds, may be effected as often as shall seem necessary, without inconvenience either to the hospital or to the public, but when the wards are large, it cannot by any means be so easily or so frequently accomplished.

And further, all the arguments that are generally adduced in support of large wards, when fairly examined, resolve themselves into this single one, namely, that the air is more pure in large wards than in small. It remains however to be proved, that the air, *cæteris paribus*, is most pure in large wards. I am inclined to doubt that it is

so. Certainly, if the small wards, as is now unquestionably the case, are too much crowded, while fewer patients are placed in the large wards, in proportion to their size, then it is only reasonable to suppose that the air ought to be less pure in the former than in the latter, but surely no one would, merely on that account, conclude, that large wards are preferable to small. Even circumstanced as the small and the large wards are at present, I believe that the condition of the air in both is nearly similar, but if fewer patients were placed in the small wards, or a greater number in the large, so as to reduce them to an equality in this respect, I am disposed to think, that the small wards would then have decidedly the advantage.

In each small ward, there is a fire-place and window. In winter, when it is necessary to have the window closed, the fire preserves a constant circulation of air, and in summer, the air which enters by the window, passes through the door exactly opposite, into the gallery, conveying with it the contagious effluvia. The galleries are terminated by windows which are kept for the most part open; the upper story of the house also is furnished with ventilators, corresponding with which there are gratings in the floors of the galleries, so that a free exit is thus at all times afforded to the impure and heated air, from every part of the building. But the large wards have not these

advantages ; in them there is no constant current of air, and therefore it is, that considering their greater extent, they are found to accommodate fewer patients than the small.

The question as to the superiority of large wards seems therefore as yet undecided, and I have been induced to make these remarks, because it appears to me to be a matter of some importance, and more particularly, because I conceive it to be one which can only be determined by the experience of those whose practice in extensive fever establishments, renders them competent to pronounce an opinion on the subject. Besides, when any doubt exists, nothing is more to be desired than a candid and liberal discussion, resulting from an anxiety to elicit truth and promote improvement ; for, thus only can we hope to arrive at perfection in the exercise of any art, but especially of one so difficult and complicated as that of medicine. But though I am, for the reasons already mentioned, inclined to give a preference to the small wards, I do not however by any means wish it to be understood, that the large wards are not likely to answer the purpose for which they are intended. On the contrary, they constitute a most important addition to the other buildings of the hospital, which considered collectively, are certainly unequalled for extent and utility.

Besides the enlargement of the Hospital, this

year was also distinguished in a singular degree by an unexampled increase in the number of admissions, the patients admitted from the fifth of January 1815, to the fifth of January 1816, the period to which this Report particularly refers, having exceeded those of every former year, to an almost incredible extent. In the year ending the 4th of Jannary 1815, the admissions were 2,398, and considered unusually numerous; but during the past year, they amounted to 3,787, a number, unparalleled in the annals of the Hospital.

It must occur to the most superficial observer as a strange and remarkable circumstance, that contagion, instead of being materially diminished, should rather have increased since the establishment of the Hospital. As to the accuracy of the fact, there can be no doubt whatever, and it therefore remains for us to investigate its cause.

The present extraordinary prevalence of fever, cannot, I think, be ascribed, to any natural defect of our city, in point of situation. Dublin has none of those local peculiarities, which are found to generate contagion with facility, or which might be supposed to render us more susceptible of its influence. Our streets are in general much wider than those of other large towns, they have of late been kept in a cleaner condition than formerly, and are not commanded by any neighbour-

ing heights capable of preventing a free circulation of air. The vicinity of the sea also, the size and rapidity of the river which divides our town, and the abundance of water with which it is supplied, are advantages so far superior to those which most other cities possess, that were we to consider it merely in reference to its situation, they would induce us at once to pronounce it, one of the most healthful in the world.

The causes so productive of contagion, must therefore be sought for elsewhere, and I believe they will be found to exist in the manners of the lower ranks by which it is inhabited. Here, we look in vain for that sober demeanour and laborious assiduity so characteristic of patient industry, and so essential to the existence of every well regulated community. Instead of these qualities, we daily witness instances the most degrading to human nature, and behold in our streets crowds of wretched objects, so lost to every sense of decency, and of habits so depraved, that they seem rather beings of an inferior order. Indifferent as to the present, and careles about the future, they have acquired an habitual listlessness, and an unaccountable apathy, which, without rendering them content with their situation, incapacitates them from active exertion. Hence their habitations, their dress, their persons, are filthy to a degree; they have no taste for neatness;—to them

the comfort of cleanliness is unknown. Existing under such circumstances, and leading a life at one time of excess, and again of penury and distress, how is it possible that they can ever be free from contagious disease? From the nature of contagion it is not in our power to annihilate it altogether, we can only pretend to moderate its influence; and this can never be accomplished to any considerable extent, until good order, industry, and sobriety, shall succeed to gross irregularity, idleness, and habitual intemperance; and until, in place of a total indifference to the comforts of life, an anxiety for cleanliness, and a taste for neatness shall stimulate the lower ranks to laudable exertion.

Until such change shall be effected in the morals and habits of the people, it is likely that his expectations will be disappointed, who hopes that the actual quantity of fever can be sensibly diminished, through the agency of our hospital. The time is, however, I trust, not very remote, when the condition of the labouring classes of this extensive city, shall be such as to prove a source of pleasing reflection to the sincere lover of his country. It is to be hoped, that commerce will again revive, and dispense its blessings generally, by affording constant employment to the well-disposed and industrious; and it is equally to be desired, that education may be more widely diffused, for to education,

it appears to me, that we are in a great measure to look for their permanent improvement.

These, however, are circumstances over which our system of prevention can exert no control, and therefore it is not to be objected to its efficacy, that contagion should still continue to prevail, notwithstanding all our exertions. Though fever were never to be diminished, yet the effects of our hospital are not on that account to be considered as altogether inefficacious, since it annually preserves the lives of numerous individuals, who must otherwise have perished. What would have been the mortality during the past year, if the 3,787 patients admitted into the hospital, had been suffered to remain neglected in their crowded apartments, most of them without proper medicines or advice, and many without even the necessaries of life! Instead of only one death in twenty, one in five would perhaps, have occurred; a conviction of itself fully sufficient to demonstrate the superior value and excellence of the Institution.

The following Table, which I have calculated from the annual reports of the Committee, in which are stated precisely the number of patients that have died, and also the number of those that have been dismissed cured, will shew the comparative mortality at different periods.

Year	1804.	1805.	1806.	1807.	1808.	1809.
Died,	1 in $13\frac{2}{15}$	1 in $10\frac{1}{97}$	1 in $12\frac{27}{81}$	1 in $11\frac{30}{31}$	1 in $11\frac{9}{48}$	1 in $13\frac{13}{80}$
Year	1810.	1811.	1812.	1813.	1814.	1815.
Died.	1 in $11\frac{15}{79}$	1 in $12\frac{94}{113}$	1 in $13\frac{4}{21}$	1 in $16\frac{52}{163}$	1 in $16\frac{113}{141}$	1 in $19\frac{140}{191}$ or 1 in 20 nearly.

The average mortality, from the foundation of the Hospital to the end of the year 1815, has been very nearly as one in $14\frac{1}{3}$, but we are not therefore to infer, that the mortality from fever is in the same proportion. For, of the deaths that have taken place, it may be observed, that many are in consequence of diseases different from fever, and occurring either in the progress of the original fever, or succeeding to it during the period of convalescence.

Amongst the females, for example, several have died of the diseases consequent on pregnancy, where their fever was either completely subdued, or would otherwise most probably have terminated favourably. And in both sexes, the infirmities of age, and the disorders connected with a worn-out constitution, have often contributed to increase materially the number of our deaths. Another cause of mortality also, is to be traced to the improper treatment of patients, previously to their admission into the Hospital. It frequently happens that where a patient has been under the care of an injudicious practitioner, and has been blood-

ed or purged, or blistered to excess, that when his strength begins to fail, and his case seems hopeless, he is then, and only then, advised to apply to the hospital for relief, and forced upon us for the purpose of releasing his former attendant from all share of responsibility. Under such circumstances, what can we effect towards accomplishing a cure? We may, indeed, prolong the patient's existence, and by the use of wine and invigorating cordials, support his strength for a time, but it is in vain to look to his ultimate recovery; the principle of life, which was unnecessarily wasted in the commencement, becomes unequal to the struggle of a protracted illness, so that at length, he sinks into the grave from mere exhaustion.

From the Table of the comparative mortality in the Hospital, it appears that our deaths have of late years decreased considerably, and that in the last year in particular, our exertions have been attended with unusual success. The cause of this diminished mortality has been ascribed to the popular character of the Hospital, which induces the patient to apply for admission at an early period of his disease, before the symptoms have increased in violence, and when medicine can of course be employed with a greater prospect of success.

This opinion does not however seem to me to be correct, for if it were, it would follow, that the deaths which occurred during the last year within

a short period after admission, must have been less in proportion than those of former years, in which the mortality was greater. If we suppose that whatever patients die within the four first days after admission, are admitted at a period too late for the successful employment of medical skill, the argument deduced from the principle of "early application," in order to account for our decreased mortality, can only apply to such cases; for when the patient survives beyond that period, some benefit may reasonably be expected to result from the interference of art. But instead of any progressive diminution, a remarkable coincidence in this respect exists between the deaths of different years. I have selected those of 1805, 1810, and 1815, in each of which the deaths were as follows:

Year	1805,	1810,	1815.	
Total deaths,	67	158	191	
Within 4 days,	22	49	59,	or nearly

one-third of the entire in each year.

Our decreased mortality, must therefore be referred to some other cause, and it can scarcely be explained, on the supposition, that the prevailing fever of the last year was less malignant than usual. That fever is now less malignant than it was some years ago, is I think improbable, for in the last year we certainly had our proportion of bad cases, and the fever which prevailed, was besides, unusually

contagious. It is therefore, evident that the diminution of mortality, must have depended principally on the exertions of the physicians, a fact highly creditable to the institution, and one which places in the clearest light, the efficacy and importance of the medical profession. It proves decidedly, how much may be effected by the timely and judicious administration of remedies; and how greatly the chances of recovery are increased, when the efforts of nature are seconded and properly regulated by the experienced practitioner.

In the course of the last year, the assistant Apothecary, and one of the Physicians, were attacked with fever; the latter was for a time dangerously ill. Of the other persons employed at the Hospital, eleven suffered from the effects of contagion, but none of them died.

The following Table will explain the number of Patients that were admitted into the Hospital during the different months, and also the number of dismissals and deaths in each respectively :

From 5th January, 1815, to 4th January, 1816, inclusive.

	Admitted.	Dismissed.	Died.
Jan. -	220	211	12
Feb. -	266	236	9
March,	269	240	19
April,	276	258	18
May, -	284	272	16
June, -	369	330	20
July -	354	330	15
August	356	360	17
Sept. -	364	349	17
Oct. -	382	366	19
Nov. -	344	335	10
Dec. -	303	301	19
	3787	3578	191

On the subject of the diseases which are most apt to prevail at particular seasons of the year, much has been written, and it is asserted by some that a distinction should be made in the treatment of such diseases, since what might be proper at one time, would probably be injurious at another. It is true, that at certain periods of the year, cer-

tain complaints predominate. Thus, in the spring of the last year, pneumonia was frequent; in summer, fever was extremely contagious, and mostly of the simple type; in autumn, the cases of fever were accompanied with bilious or putrescent symptoms, and in winter with catarrh and general rheumatic pains. But instances of all the cases that I have mentioned, were found to occur at every period of the year, and I never observed that any inconvenience resulted from their being managed in the manner indicated by the nature of the existing symptoms. I therefore think that no speculative opinions as to the particular season of the year, should be suffered to interfere with that decisive practice, which the urgency of the case may require. For if the physician, misled by theory hesitate, and merely palliate symptoms, their violence is perhaps only diminished, not subdued, and the patient's recovery becomes thereby endangered, or retarded.

As far as regards the treatment of fever, I would remark, that the remedies which are necessary for its cure, are few and simple, and the great difficulty of practice consists, not in artfully combining together a great variety, but in selecting, and judiciously applying, that which is most appropriate.

Of those usually employed in the management of fever, purgatives are unquestionably the most

important. They are of all remedies, the most efficacious, and the most generally applicable to every form, and at every period of the disease.— Indeed, there is not to be found an instance of fever, in which it is not necessary to promote the alvine evacuations; and experience proves that in a great proportion of fever cases, this is the only indication to which it is of importance to attend.

In fever, unaccompanied with local pain, and in which the stomach and chylopoietic viscera are the principal seat of the disease, purgatives alone are necessary. Their selection, however, requires some discrimination. When the pulse is firm and full, and the heat of the skin exceeds the ordinary temperature of health, the infusion of senna, with sulphate of magnesia, is an excellent medicine.— When administered in such cases, it not only unloads the intestines, but frequently produces a gentle moisture on the surface, which, by its evaporation, moderates the increased heat of the skin. I have also thought that it sometimes appeared to cause a more copious secretion of urine, especially when its use was not succeeded by perspiration.

When, however, the heat of the skin is less, the pulse more languid, and the general powers of life obviously more exhausted, a preferenee should always be given to the oleum ricini, warmed with the tincture of senna. A draught thus prepared

acts quickly, with great certainty, and little irritation. It consequently does not much exhaust the patient; nor does it determine to the skin so as to excite perspiration, which under such circumstances, as far as I have observed, rarely affords relief. Indeed, when the temperature of the skin does not much exceed the standard of health, perspiration is in general prejudicial. In low fever, perspiration, when not critical, indicates a debility of the extreme vessels, and when produced by sudorifics, after the excitement has subsided, the state of torpor which succeeds, is propagated from the surface to some of the internal organs, which are perhaps, the most essential to life, so that thus the general debility is increased. Hence, in low fever, perspiration should be checked rather than encouraged, and not only antimonials, but neutral salts, and indeed all medicines, which determine strongly to the surface, ought either to be entirely withheld, or administered with great caution.

When the powers of life are still further exhausted, and the strength reduced even to a lower degree, possibly it would be imprudent to use in the first instance, any cathartic. Life is sometimes so nearly balanced, that the most trifling additional exhaustion would prove sufficient to turn the scale, and cause the disease to terminate fatally. Drastic and irritating purgatives would probably have this effect; and yet it is of the utmost importance

to attend to the alimentary canal, so as to preserve a moderate and gentle action of the bowels.—Laxative injections are therefore the only means to which we can resort, until the powers of the circulation shall have been first restored by cordials. A small oil draught, with tincture of rhubarb, will then be proper, and instead of exhausting, it will be found rather to increase the strength by removing one of the principal causes of debility.

It contributes greatly to the efficacy of the purgative plan to prepare the bowels, for such as operate quickly, by one, which acting slowly and imperceptibly, shall merely disengage the fecal matter from the mucous membrane of the intestines, so that it can be readily removed by the purgative which succeeds. For this purpose, calomel is a medicine of great value, when given in small and repeated doses. To operate as a cathartic by itself, it should be taken in larger quantities than it would be prudent to prescribe. I therefore, never give it with a view that it should operate as such, but merely in order to prepare the stomach and intestines for that which is to succeed it. Combined with ipecacuanha, so as to form a pill of two grains each, one of which is to be given once, twice, or three times in the day, according to the urgency of the symptoms, it seldom either excites any uneasiness, or purges, but proceeding slowly, gently

irritates the duodenum and biliary ducts, promoting the evacuation of the bile, the natural and proper stimulus of the intestines.

Sometimes, when the liver has been unusually turgid, and the gall-bladder distended with bile, a small dose of calomel will appear to produce a violent purgative effect, while a larger dose, given a day or two after, will not operate at all. The reason of this is, that it is the bile, and not the calomel which purges. The calomel, indeed, sets the bile in motion, by promoting its passage into the intestines, but when the bile has been discharged, the calomel, which is afterwards taken, remains without producing any obvious evacuation. However, it is not therefore to be considered as either less active, or less efficient. The general system appears to sympathize principally with the condition of the stomach and upper portion of the intestinal canal, and it is on these parts that calomel particularly acts. By removing the viscid mucus which disorders the stomach, and the bilious and feculent accumulation which obstructs the duodenum, it produces the most beneficial effects, and this even in a shorter space of time than one might at first be inclined to suppose.

The calomel and ipecacuanha pill, seldom either gripes or nauseates, unless when there is great ir-

ritability of the bowels or stomach. In the former case, an oil draught presently removes all uneasiness ; and in the latter, if the retching is obstinate, having first cleared out the stomach with the infusion of chamomile, an effervescing draught should be given, after which the use of the pills may be resumed if necessary.

Even the mildest purgative sometimes operates too often, producing numerous watery discharges, which are productive of no relief whatever, but on the contrary, harrass the patient, and interrupt his rest. In such cases, I have no hesitation in saying, that so long as fever continues, all astringents are pernicious. The chalk-mixture, with opium, kino, or catechu, may afford temporary relief, but such medicines can never remove the cause of the complaint. Instead of a mixture of the kind, an oil draught with tincture of rhubarb should be given, and if the discharges still continue too frequent, a starch injection, with 30 or 40 drops of the tincture of opium, must be directed, and repeated as occasion shall require. Thus the necessary purgatives are persisted in, and at the same time the patient is not harrassed or exhausted by their frequent operation.

The simplest form of contagious fever is that in which the functions of the stomach, and chylopoietic viscera, are those principally disturbed, the

patient being unaffected either by local pain or delirium. Such fevers as correspond in these respects, whether combined with bilious, petechial, or putrid symptoms, may all be referred to the same class, and are to be treated chiefly by purgatives. But the bilious, or putrid symptoms, though they are to be considered as casually present, and as incapable of constituting an essential difference, are however by no means to be neglected.

When the thirst is excessive, or the patient complains of an unpleasant taste, I have found a mixture acidulated with the muriatic acid, and agreeably sweetened, of considerable use. By its refrigerative and antiseptic properties, it removes thirst, and corrects the unpleasant taste of the mouth, which it cleanses, detaching from the tongue that brown or black crust, which often so strongly adheres to it.

It has been objected to the use of mineral acids in fever, that they cannot safely be given, when it is found necessary to administer calomel at the same time. This objection, however, has no just foundation, for calomel is not sensibly acted upon by the diluted muriatic, nitric, or sulphuric acids, even at a boiling heat. In fact, I have never, in a single instance, had occasion to remark, that any inconvenience followed from the use of the muria-

tic acid mixture, which is the one I usually employ, although given repeatedly in the day, in the intervals between the exhibition of the calomel and ipecacuanha pills. When the symptoms are urgent, and the patient finds the acid flavour agreeable, it may be taken *ad libitum*, either by itself, or if there is great debility, with the camphor mixture, or wine ; or when there exists a tendency to putrescency, with the addition of some barm.

Under this treatment, I generally find that in a short time, a very evident and decided improvement takes place. The condition of the tongue in particular is altered for the better, it becomes more moist, much less swelled, and the black crust can be separated with less difficulty than before.—The patient drinks with greater freedom, and often calls for the acidulated mixture, preferring it to wine or whey.

I therefore consider it, though by no means a principal remedy, yet as certainly a useful and valuable auxiliary in the management of fever, and one, which from its tonic and detergent properties, deserves to be very frequently prescribed.

These observations apply generally to fevers of every description, but when a fever becomes more complicated, other remedies must be superadded, in order to meet the existing symptoms. Thus

when in addition to the symptoms, which are essential to fevers of the first class, namely, such symptoms as indicate a derangement of the stomach and chylopoietic viscera, there also exists local pain, attended with the impeded exercise of the functions of any organ, means must immediately be adopted to remove the local distress, and restore, if possible, the healthy action of the diseased part.

Fevers of this kind, constitute a second class, and besides the use of purgatives, it is almost always necessary to employ in their treatment, general blood-letting, assisted by the application of blisters, and such other remedies as the nature and structure of the organ shall indicate. For instance, in fever combined with pneumonia, blood-letting can never be omitted, and when aided by blisters, digitalis, expectorants, and the inhalation of vapour, it will in general give relief.

Between ordinary pneumonia, and pneumonia accompanied with contagious fever, a great difference is to be observed. In idiopathic pneumonia, blood-letting may be pushed to a considerable extent, and perhaps it is sometimes necessary, that the bleedings should not only be copious, but frequently repeated. But in pneumonia attended with contagious fever, a single copious venæsection, would most probably produce rapid effusion in the chest, or cause the accompanying fever to

change from the inflammatory or bilious type, to that of a putrid and malignant form.

In the management of pneumonia combined with contagious fever, I have experienced the most beneficial effects from the employment of the tincture of digitalis. This medicine fully merits the praises which have been bestowed on it, and though some have questioned its powers in diminishing the frequency of the pulse, I feel persuaded that its influence on the heart, and arterial system, is a point as fully established as any other in the practice of medicine. It decidedly contributes to mitigate the violence, and shorten the duration of pneumonia, and it thus renders it unnecessary, to bleed either to the same extent or as frequently as we are obliged to do when we neglect to avail ourselves of its assistance.

When a case terminates fatally, either our art is imperfect, or, if sufficient to have cured the disease, it must have been injudiciously applied. In either point of view our failure calls for inquiry, and the reflections suggested by such inquiries, often lead to solid and permanent improvements. I formerly thought that in pneumonia, if the pain of the side was very acute, and the pulse strong and full, our principal dependence was placed in blood-letting, and that a quantity should always be taken sufficient to produce at the instant, a considerable alleviation of the symptoms. A very

striking circumstance, however, occurred, which caused me to alter my previous opinion, and induced me to prefer the more cautious practice, which I have subsequently adopted.

I happened to prescribe, nearly at the same time, for two male patients, who were both about five and twenty years of age. Both had been only a few days ill, and both complained of symptoms as nearly similar as possible. Their symptoms were those of pneumonia; they had a strong hard pulse, a severe cough, and an acute pain of the side, which impeded respiration, and was increased when they attempted to make a full inspiration. I desired that blood should be taken from both to the extent of sixteen ounces, that a blister should be applied, and a purgative draught given without delay. Both were relieved by the bleeding, and in both the blood was highly buffed. One patient rapidly recovered, and was discharged in about a week. The fever of the other, however, in two days after the bleeding, assumed a malignant character, and though the pectoral symptoms were entirely removed, it pursued its course and terminated fatally.

From the great similarity of these two cases in the commencement, the similarity of the practice adopted, and their very dissimilar termination, I was induced to consider with attention, the cause

on which depended a result so different. I suspected that in the case which ended fatally, blood had been too freely taken, and that although blood-letting was indispensable, yet a smaller quantity might have been sufficient. Subsequent experience has confirmed me in my opinion, and I think I can safely venture to assert, that eight ounces of blood is as much as it is proper to take at once, in pneumonia attended with contagious fever.

In general, the following is the practice which I pursue. I direct a calomel pill of three or four grains to be taken immediately, and in two hours after, an oil draught. The patient is blooded to the extent of six or eight ounces, and a blister is applied to the part of the chest most affected. On the first operation of the purgative, an ounce mixture is given, and repeated every third hour, containing from eight to ten drops of the tincture of digitalis, and from one to two grains of ipecacuanha, with a little of the oxymel of squills, and some of the water of the acetate of ammonia. Should the draughts nauseate, their effect will be more certain, for I have remarked, that a moderate retching tends to discuss the inflammation, and to promote a free and copious expectoration.

It is seldom necessary to repeat the bleeding more than the second or third time at the most, and in a great majority of cases, the first alone is

sufficient; for though in moderate quantity, yet being at the same time assisted by so many other means, the united influence of all, easily and safely effects that which none of them singly could accomplish.

It sometimes happens, that fevers are attended with pain and inflammation, affecting more than one organ at the same time. It must be obvious, that such cases become more formidable, and more doubtful, as to their termination, in proportion to the number and importance of the organs affected. However, I think I have remarked, that though blood-letting is essential to their cure, yet it must be resorted to with greater caution, and more sparingly employed, than in cases less complicated. When large bleedings are used under such circumstances, the strength rapidly sinks, the reactive powers of the system having already been too much exhausted by the previous derangement of so many functions.

Besides the divisions already mentioned, under which I have found it convenient to arrange fevers, with a view to practical purposes, there is a third class, comprehending such as are characterized by great disturbance of the sensorial functions, attended with watchfulness, delirium, low muttering or stupor. Fevers of this kind afford examples of the genuine typhus, and even when of the mild-

est form, are of a nature calculated to create the greatest alarm, and to call for the utmost attention on the part of the physician.

The treatment to be pursued in such cases, varies exceedingly, according to the different causes on which the several symptoms shall appear to depend. When the patient is affected with stupor and insensibility, and the determination of blood to the head is obscure, when the features are hollow, the face pale, and the pupils dilated; and when there is no increased heat of the head, or unusual pulsation at the temples, the propriety of topical blood-letting is very questionable. In addition to the use of purgatives, which never can be dispensed with, I am disposed to think that blisters frequently repeated, and powerful stimulants internally, are more strongly indicated. Certainly I have witnessed several instances, in which the abstraction of blood from the temples was not productive of any advantage; and I think it right to mention, that frequent cases of recovery have occurred, where it was entirely omitted When however, there are indications of a strong determination to the head, wine and other stimulants are injurious, and purgatives, topical blood-letting, blisters to the occiput, and cold applications to the vertex and forehead, are alone to be depended on. By these means, the tendency to the head is subdued, and frequently a rapid convalescence ensues.

The principle which I have ventured to lay down as proper for the arrangement of fevers, is to commence with the most simple, and from them to proceed to such as are more complicated. To complete this arrangement, it must be evident therefore to the practitioner in fever, that there still remains a fourth and last division, containing those which consist of typhus fever combined with local inflammation.

In fevers which belong to this class, in addition to the derangement of the alimentary canal, some essential organ labours under inflammation, and the functions of the brain are at the same time greatly disturbed.

These cases are fortunately those which are the least numerous; but still they often present themselves to our observation, and though they sometimes afford conspicuous evidence of the value of our art, yet they too often give us cause to regret its uncertainty and inefficacy. Indeed the long train of alarming symptoms by which they are frequently accompanied, evidently indicates their tendency to a fatal termination. In their most aggravated form, when the teeth are incrusted with sordes, and the tongue is brown or black, dry and rough to the touch; when there exists great tension and pain of the abdomen, and a distressing cough, with difficult and laborious respiration;

when the patient is delirious, and scarcely enjoys an interval of sleep, when there are universal tremors, subsultus, involuntary discharges by stool, and mortification perhaps of some external part, a more afflicting spectacle of human wretchedness cannot possibly be conceived.

In the treatment of fevers of this class, more caution is required than is necessary in those of any of the other divisions. Sometimes the most opposite remedies are indicated at the same instant, so that it is difficult to determine with respect to those to which we should give the preference. In general it is proper to bleed, in order to subdue the local inflammation, and very often it is necessary not only to relieve the local turgescence by depletion, but also to stimulate the system generally, by the exhibition of wine and other cordials.

At first view it would appear that a recovery was scarcely possible under such circumstances, and where such a contrariety of practice was necessary. It must indeed be allowed, that the various indications of cure, depending on symptoms so opposite, sometimes concurrent, and sometimes following each other in rapid succession, require more than ordinary discrimination to conduct the disease to a favourable issue. However, instances of this kind are occasionally found to recover almost contrary to expectation, a fact which should

incite the physician to additional exertion in the treatment of every fever however apparently hopeless.

It is not easy to determine the precise limits which divide disease from death, and so long as life continues, I conceive it to be our duty still to persevere ; should one mode of practice be found to fail repeatedly, it would be inexcusable to persist in it ; we should rather adopt a different treatment, and in short, try every remedy that might in any way prove beneficial. Neither prejudice, nor an implicit compliance with the prevailing opinions of the day, should deter us from exercising our judgment in the management of any disease, but particularly of a disease so rapid in its progress, and so fatal in its tendency. Whatever the nature of the symptoms shall point out, to that we should at once have recourse ; if stimulants are indicated we should use them ; and when on the contrary, there shall appear a necessity for venæsection, blood must be abstracted. The greater however, the general debility, and the more advanced the period of the disease, the greater is the caution that it is necessary to observe, both in directing the use of blood-letting, and in regulating the extent to which it is to be carried.

Nothing contributes more to assist us in arranging our ideas on any subject, than the use of terms well defined and properly applied. The

division of fevers to which I have alluded, and which I venture, with great diffidence, to suggest, will therefore be rendered more obvious, by assigning to each class a distinct name. When names sanctioned by general use, and established by custom, can be made to convey our meaning, they ought by all means to be retained; for even should it be necessary to alter them in some degree, if their precise signification is once clearly explained, the mind will be found to comprehend, and more easily remember their true application, than when words altogether of recent invention, are introduced.

Synocha and Typhus are terms to which physicians have been so long accustomed, that even were it advisable, it would hardly be possible to lay them entirely aside. It is however, by no means necessary to reject them, in order to substitute others in their place, for by using them in a sense somewhat modified, and changing the termination of each, we shall have names for the four different classes, to one or other of which, as far as my observation enables me to speak, all the various forms of continued fever may be referred.

Synocha, in its derivative and proper signification, implies simply, continued fever; and if employed in this sense only, it will denote fevers of

the first class, in which no disturbance of the sensorium, or appearance of local inflammation is found to exist.

When to the symptoms of simple fever, there are superadded those which indicate inflammation, the termination *itis* will mark the existence of such inflammation. Thus Synochitis comprehends fevers of the second class, which are distinguished by local pain and inflammation of one or more organs, the sensorial functions remaining undisturbed. Of this division the genera are as various as the organs affected, and may be termed *pleuritic*, *gastric*, *enteritic*, *hepatic*, &c.

It may, perhaps, be objected to the use of Synochitis, that in point of strict analogy, it does not accord with those genera of the phlegmasiæ, which have a similar termination, since they express, not only the idea of inflammation, but also that of the organ in which it exists. It must, however, appear obvious, that in the present case, a strict attention to such etymological exactness, even were it attainable, could only lead to ambiguity in the application of a term which must necessarily include several different kinds of local inflammation.

Typhus, originally signified fever with stupor,

but it has so far departed from its first meaning, that it is now generally used for every form of contagious fever, which assumes a malignant character. In fact, it is a term at present so indefinite, and so universally misapplied, that its abuse has created the greatest confusion, and contributed materially to retard the improvement of medical practice in fever. Hence instead either of restricting it to fevers attended with stupor, or of extending it to all which exhibit a malignant appearance, I think that it should rather be employed to denote those fevers which are accompanied with an evident disturbance of the sensorium, without any symptom to indicate inflammation. In this sense it will include the fevers of the third class, and still be used as heretofore, in contradistinction to Synocha.

By changing Typhus into Typhitis, we obtain a term adapted to explain the nature of the fourth and last class, to which belong all fevers that present typhus symptoms, complicated with inflammation of one or more organs. The genera of this class are similar to those of the second, and are formed on the same principle. In both, the local inflammation constitutes the generic difference, and the generic names of each are consequently the same.

By retaining Synocha and Typhus in a strict and

determinate sense, and employing Synochitis and Typhitis, to denote the existence of local inflammation when superadded to the primitive form of each, it appears to me that the practitioner may be assisted in determining with greater certainty and facility, the treatment most likely to prove beneficial.

In Synocha, purgatives are mostly to be depended on. In Synochitis, in addition to purgatives, blood-letting and blisters must be employed. In Typhus, purgatives, blisters, cordials, and sometimes, topical blood-letting, are necessary; and in Typhitis, purgatives, blood-letting, blisters, and occasionally cordials, are indicated.

This arrangement, which the habit of seeing numerous cases of fever first caused me to adopt, I have found extremely convenient, but although the essential characters of each division were strongly impressed on my mind, it was only since I engaged in writing the present report, that it occurred to me to endeavour to distinguish them by distinct names. It is by no means an easy task to ascertain and correctly arrange the numerous varieties of fever. They sometimes approximate so closely, and the marks by which we would divide them, like distant and uncertain shadows, are often so confused, that the outline becomes obscure

and indistinct. A perfect division of fevers is in fact scarcely to be expected, and perhaps that is most to be depended on, which involves no speculative point, and is subservient only to the purposes of practice.

The tendency which so remarkably exists in medicine, of changing from one mode of practice to that of quite an opposite description, might possibly be in some measure counteracted by a classification similar to that which I have endeavoured to recommend, since in an arrangement of this kind, the name itself of each genus, indicates, as far as a mere name can do, the general plan of treatment to be pursued. No doubt, much must depend on various circumstances which the physician, only while at the bedside of his patient, can appreciate. When I speak of the remedies which the name of each genus suggests, I therefore mean only that such are in general applicable, and in the order in which I have inserted them, but by no means that they are to be either uniformly or exclusively employed.

A few years ago the name Typhus Fever, seemed to call for the liberal use of stimulants, and immense quantities of wine were accordingly given. Wine was administered indiscriminately, and of course injudiciously: it was given as well in the Typhus, combined with inflammation, as in its less

complicated form, unconnected with visceral derangement. Wine, however, is of late more sparingly, and blood-letting more frequently employed. But may we not apprehend that blood-letting, the value of which is now generally admitted, will in its turn be carried to excess, while the virtues of wine are estimated at too low a rate?

Judging of the future by the past, such an event is not impossible; and therefore still to retain the name of Typhus to indicate a class of fevers purely nervous, would direct our attention to the use of stimulants, while Typhitis, as clearly pointed out the necessity of the antiphlogistic practice. Thus, one would counteract the opposing tendency of the other, and the result would be, the cautious and moderate employment, both of wine and of venæsection. In this way, instead of occupying ourselves with any general theory of fever, we would be more disposed to consider with attention the symptoms of each particular case, in order to remove or palliate the most urgent, and thus assist the powers of life, to subdue those deranged actions which constitute the disease.

With respect to the practice of the last year, the fevers which prevailed during the first three months, were marked by an increased action of

the brain, and frequently attended with violent delirium. In such cases, the face was tumid and flushed, the eyes were red, there existed great intolerance of light, and considerable throbbing of the temporal and carotid arteries. When these symptoms had been neglected, the disease proved extremely fatal, and generally seemed to terminate by effusion in the ventricles of the brain. In cases of fatal termination, this event was indicated by stupor, dilation of the pupils, low muttering, and other appearances of coma. When such were the symptoms, wine, bark, and opium, remedies once so celebrated in the treatment of fever, were altogether inadmissible, at least in the commencement of the disease, and even towards its conclusion required to be administered with caution.

The plan which experience proved to be most successful, consisted in moderating the violent action of the brain, by means of the various antiphlogistic remedies; but more particularly by topical blood-letting. When the excitement was considerable, the head was uniformly directed to be shaved, and repeatedly washed with cold water and vinegar. Leeches were applied to the temples, and if they failed to afford relief, or if the urgency of the symptoms required, in the first instance, more active treatment, the temporal artery was opened, and blood taken to the extent of

from four to six ounces. By these means the local excitement was diminished, the symptoms became less violent, and the patient gradually recovered; whereas, had he been stimulated by spirituous or heating medicines his danger would have been increased, in the exact proportion of the means that were used, with a view, to insure his recovery.

Theory, has at all times exerted a most pernicious influence over medicine, and probably a greater number of individuals have fallen a sacrifice to the many prejudices of which it is productive, than have at any time recovered, in consequence of the advantages that it affords. Indeed of this I am persuaded, when I consider the practice of the present day, and compare it with that which prevailed at no distant period. Many of the cases for which it was necessary to prescribe blood-letting, in order to moderate the increased action of the vascular system, were cases of petechial or spotted fever. Even in our own memory, the appearance of petechiæ was considered a symptom of the most alarming kind, and one which indicated the utmost debility. Wine and bark, were therefore given in the greatest possible quantity, under the conviction that they were absolutely necessary to support the patient's strength, and obviate the effects of putrescency.

Fortunately however, the treatment of fever is now better understood, and a more rational, and infinitely more successful mode of practice is adopted. Wine and bark are no longer considered essential to its cure, and in their place remedies of quite an opposite nature, are administered with the most decided advantage. But, what has most of all contributed to diminish the mortality of fever is the introduction of blood-letting, which was until of late, with so little reason, so much dreaded and so universally censured; though at the same time it is only proper to acknowledge, that there is no remedy which may be more frequently abused, or which, in fever especially, is capable of producing more destructive consequences when injudiciously employed.

Of this I had an opportunity of observing a striking instance, in the case of a man, who had been blooded to the extent of eight ounces, without appearing at the time to suffer any inconvenience. In the course of two days however, he complained of a pain in his arm; the puncture of the lancet had become inflamed, it soon assumed a gangrenous appearance, and notwithstanding every effort to arrest its progress, the mortification continued to spread, until it included the entire arm from the shoulder down to the fingers, and even a great portion of the side, when the patient, worn out by his sufferings, at length expired.

It appears to me, that the author of the blood-letting system, has pushed his practice to an unnecessary extent, and recommends it too generally; which may perhaps be accounted for on the principle, that most persons who have suggested any scientific improvement, are naturally inclined to attach to it more importance than it really deserves, the interest that they take in its success, rendering them anxious to extol it to the utmost. Hence also, it sometimes happens that their anxiety defeats the very object that they have in view, for by promising too much, they disappoint the expectations of those who adopt their system, which therefore though useful to a certain extent, soon falls into disrepute and is neglected altogether.

It is probable, that such has already been the case even with this particular remedy, for the practice of blood-letting in fever has no claim whatever to the merit of originality. It is a fact that this remedy was employed nearly two centuries ago, precisely in the same way and in cases exactly similar to those in which it is used at the present day. In Riverius's practice of medicine, there is an account of the treatment of a fever termed, "*Febris continua et maligna*," in which the patient was blooded repeatedly in the manner recommended by the author of the essay, and eventually recovered.

Blood-letting in fever, is therefore a remedy which having been once perhaps generally practised, was afterwards neglected, probably in consequence of its being abused, and is now revived. But although it must ever be abused, in the hands of injudicious persons, yet surely this circumstance should not be considered an objection to it, nor should it on that account be less employed by practitioners in cases where it is clearly indicated. For this would be indeed, to run into the opposite extreme, and verify the adage of falling into Scylla, by endeavouring to avoid the dangers of Charybdis.

Practitioners formerly erred much with respect to blood-letting in the treatment of fever, for they either obstinately refused to bleed, or if the symptoms were so urgent as to admit of no other remedy, they generally blooded to excess. But, as the injurious effects from excessive blood-letting were for the most part obvious, while patients who had not been blooded occasionally recovered, the depleting system came into disrepute, and the stimulating practice was adopted.

It is fortunate for the present time, that we now clearly perceive the advantage of pursuing a middle course; for I am convinced that there is not in medicine a maxim of greater practical utility

than this, when symptoms require blood-letting, bleed, but bleed *moderately*. And in this, I think, consists the entire merit of the system alluded to, that it has directed our attention to an active and a useful remedy, which our predecessors were prevented from employing, by the influence of ill-founded apprehensions resulting from erroneous opinions, with respect to its mode of action, and the nature of the effects that it produces.

March 1816.

FINIS.

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THE

ASSOCIATION OF MEMBERS

OF THE

King's and Queen's College of Physicians in Ireland,

INSTITUTED THE 19TH JUNE, 1816,

For the purpose of more intimately uniting the Members of the College, and for the advancement of Medical Information.

N. B. All communications are to be directed to the Secretary, Doctor Robert Reid, 16, *Belvedere-Place, post paid.*

THE

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Perceval, Dr. Edward, 20, Upper Merrion-street.

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☞ *In consequence of each Gentleman having undertaken the revisal of his own Paper, a few inaccuracies have occurred in the course of the Volume.*

EXPLANATION OF THE PLATE.

FIGURE I.

A front view of the spinal marrow covered with the dura matter.

(a) Where the Nerves pass out to be distributed to the muscles.

(b) Extravasation into the cellular substance, between the dura mater and the bodies of the lower cervical, and two upper dorsal vertebræ.

FIGURE II.

A front view of the Nervous Substance of the spine, covered only with the arachnoid coat and pia mater.

(a) The vein and all the vessels appearing remarkably tortuous.

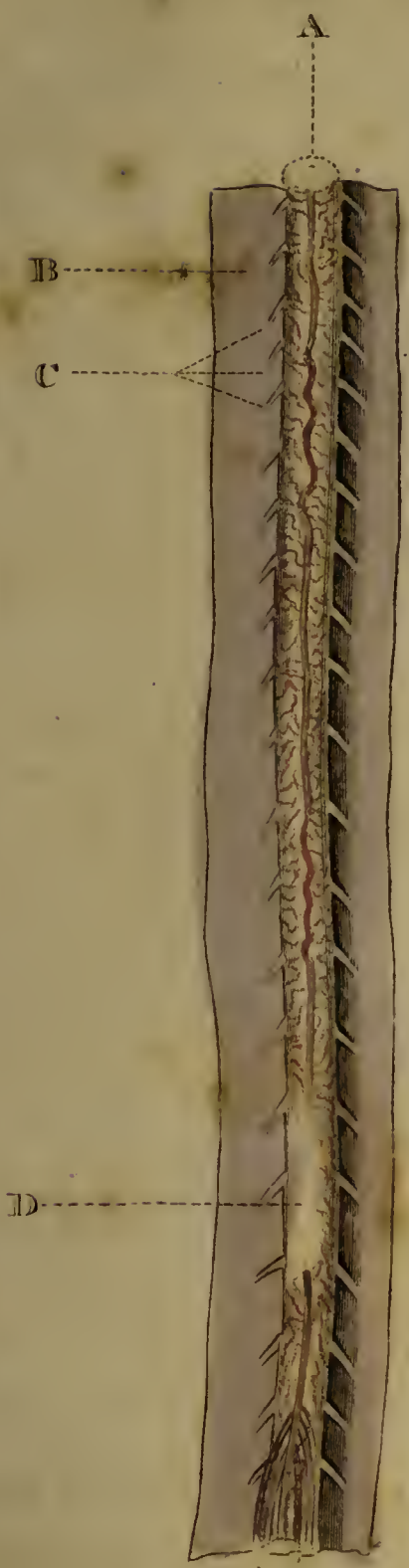
(b) The dura mater split up, and spread out.

(c) The Nerves perforating it.

(d) A whitish substance thrown out between the arachnoid coat and pia mater.

FIG. I

FIG. II



MORBID APPEARANCES
of
the Spinal System in Tetanus.

HOLBROOKE SCULP. 15 ANGLESEA ST.